INTERNATIONAL FOOD INFORMATION SERVICE

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FAB 47

FOOD SCIENCE AND TECHNOLOGY BOOKS

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FOOD SCIENCE AND TECHNOLOGY ABSTRACTS

under the direction of

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FOOD SCIENCE AND TECHNOLOGY BOOKS

FEBRUARY 1977

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INTRODUCTION

Food Annotated Bibliographies (FABs) are collections of abstracts on specific topics in food science and technology. The topics are chosen by the staff of the International Food Information Service as being of particular interest or importance. The topics normally interest individual workers, who may not require the full information provided in Food Science and Technology Abstracts, from which the abstracts for FABs are taken. The size and the cost of the FABs are controlled as much as possible with the interests of individual workers in mind.

Titles of the FABs now available are given on the back cover of this booklet. New titles are being added at the rate of about 10 per year. For up-to-date lists of FABs or suggestions for new topics please write to the address given overleaf. New subjects are searched for at least the five most recent volumes of Food Science and Technology Abstracts. Thereafter each FAB is updated monthly. Copies of each months abstracts on any topic may be obtained as indicated on the back cover of this publication. At the end of each volume of up-dating, the abstracts are merged and made available as a separate supplement to the original FAB.

Some of the larger FABs have been divided into sections to facilitate use. Abstracts are not printed in more than one section. The larger FABs also have subject indexes provided.

Copies of all original articles referred to in the abstracts may be bought (or occasionally borrowed) from the International Food Information Service. A form for ordering these is provided at the end of this FAB.

Coverage of the subject has been restricted to that of Food Science and Technology Abstracts, which covers over 1200 of the important food journals, patents from 20 countries and books published world-wide. Every effort is made to include all significant references, but editorial discretion is used on the many articles of borderline interest. If the reader particularly needs an exhaustive search of the subject, we will be pleased to provide any other references that we have available. We would, in any case, encourage readers to write or telephone us with any comments or queries that they may have.

H. BROOKES

ASSISTANT EDITOR

ABBREVIATIONS

These entries are used in addresses only

A	ampere
abstr.	abstract
*Acad. Akad.	Academy etc.
ad lib.	Ad libitum
*Agric.	Agriculture, Agricultural etc.
AI	Artificial insemination
a. m.	ante meridiem
Anon.	Anonymous
AOAC	Association of Official Analytical Chemists
approx.	approximately
*Assoc.	Association
atm.	atmosphere
Aug.	August
*Bact.	Bacteriology
*Biochem.	Biochemistry
*Biol.	Biology
BOD	biological oxygen demand
bp	boiling point
Btu	British thermal unit
c-	centi- (as in cm, cm^2, cm^3)
°C	degree Celsius (Centigrade)
cal	calorie
cd	candela
*Chem.	Chemistry
Ci	curie
CMT	California mastitis test
COD	chemical oxygen demand
coeff.	coefficient
*Coll.	College
*Co.	Company
conc.	concentrated
concn.	concentration
*Corp.	Corporation
CSIRO	Commonwealth Scientific and Industrial Research Organization
cwt	hundredweight
Dec.	December
*Dept.	Department
detn.	determination
DHIA	Dairy Herd Improvement Association
diam.	diameter
dil.	dilute
*Div.	Division
DM	dry matter, Deutsche Mark
DNA	deoxyribonucleic acid(s)
DSA	Dairy Science Abstracts
E.	East, Eastern etc.
EEC	European Economic Community
e. g.	for example
Eh	Oxidation-reduction potential
*Eng.	Engineering etc.
*Expt.	Experiment etc.
f	femto-(10^{-15}, as in fCi)
°F	degree Fahrenheit
*Fac. Fak.	Faculty etc.
FAO	Food and Agricultural Organization
FDA	Food and Drug Administration
Feb.	February
*Fed.	Federal, Federation etc.
fl oz	fluid ounce
fp	freezing point
FSTA	Food Science and Technology Abstracts
ft	foot, feet
g	gram
g	gravity
gal	gallon
GLC	gas-liquid chromatography
*Govt.	Government
h	hour
ha	hectare
hl	hectolitre (100 l.)
hp	horse power
HTST	high temperature short time
Hz	hertz (frequency/sec)
i. e.	that is
in	inch
*Inc.	Incorporated
*Ind.	Industry etc.
*Inst.	Institute etc.
*Int.	International
IR	infrared
IU	international unit
J	joule
Jan.	January
k-	kilo- (as in kcal, kg)
kgf	kilogram-force
*Ltd.	Limited
l.	litre
*Lab.	Laboratory
lb	pound
lbf	pound-force
m	metre
m-	milli- (as in mg, ml, mm)
m-equiv.	milli-equivalent
M	molar concentration
M-	Mega- (as in Mrad)
max.	maximum
*Med.	Medicine etc.
*Microbiol.	Microbiology
min	minute (time)
min.	minimum
Min.	Ministry
mol	mole
mol. wt.	molecular weight
mp	melting point
MPN	Most Probable Number
MS	mass-spectrometry
n-	nano- (10^{-9}, as in nm)
N	Newton (kg m/sec^2)
N.	North, Northern etc.
N	normal concentration
*Nat.	National
*Nauchno-issled.	Nauchno-Issledovatel'skogo etc.
*NSW	New South Wales
NMR	Nuclear magnetic resonance
Nov.	November
*Nutr.	Nutrition etc.
Oct.	October
oz	ounce
p-	pico- (10^{-12}, as in pCi)
P	Poise
Pathol.	Pathology

*Physiol.	Physiology etc.
p.m.	post meridiem
ppm	parts per million
PVC	polyvinyl chloride
PVDC	polyvinylidene chloride
qt	quart
r	röntgen
rad	rad or radian
ref.	reference(s)
*Res.	Research
rev/min	revolutions per minute
RH	relative humidity
RNA	ribonucleic acid(s)
S.	South, Southern etc.
*Sci.	Science, Scientific etc.
SD	Standard deviation
SE	starch equivalent
SEM	standard error of the mean
s	second (time)
*Sel'-skokhoz.	Sel'skokhozyaist-vennoi etc.
Sept.	September
SNF	solids-not-fat
sp., spp.	species
sp. gr.	specific gravity
*St.	State etc.
*Sta.	Station etc.
summ.	Summary
t	metric tonne (1000 kg)
TDN	total digestible nutrients
*Tech.	Technical, Technology etc.
temp.	temperature
TLC	thin layer chromatography
TS	total solids
UHT	ultra-high temperature
UK	United Kingdom
*Univ.	University etc.
USA	United States of America
USDA	United States Department of Agriculture
USSR	Union of Soviet Socialist Republics
*Util.	Utilization
UV	ultraviolet
V	volt
var.	variety
*Vet.	Veterinary
vol.	volume
*Vses.	Vsesoyuznyi etc.
v/v	volume/volume
vs.	versus
W	watt
W.	West, Western etc.
WHO	World Health Organization
w/v	weight/volume
wk	week
wt.	weight
yd	yard
yr	year
μ-	micro- (as in μg, μm)
%	per centum
>	greater than
≥	greater than or equal to; not less than
<	less than
≤	less than or equal to; not greater than

Chemical symbols are used for all elements.

ABBREVIATIONS FOR LANGUAGES

	Language of text	*Language of summaries*
Afrikaans	Af	af
Albanian	Al	al
Arabic	Ar	ar
Armenian	Am	am
Azerbaidzhan	Az	az
Belorussian	Be	be
Bulgarian	Bg	bg
Chinese	Ch	ch
Czech	Cs	cs
Danish	Da	da
Dutch	Nl	nl
English	En	en
Estonian	Ee	ee
Finnish	Fi	fi
French	Fr	fr
Georgian	Ge	ge
German	De	de
Greek	Gr	gr
Hebrew	He	he
Hungarian	Hu	hu
Indonesian	In	in
Interlingua	Ia	ia
Italian	It	it
Japanese	Ja	ja
Kazakh	Ka	ka
Korean	Ko	ko
Latvian	Lv	lv
Lithuanian	Li	li
Macedonian	Ma	ma
Malay	My	my
Norwegian	No	no
Polish	Pl	pl
Portuguese	Pt	pt
Roumanian	Ro	ro
Russian	Ru	ru
Serbo-croat	Sh	sh
Sinhali	Si	si
Slovak	Sk	sk
Slovenian	Sn	sn
Spanish	Es	es
Swedish	Sv	sv
Turkish	Tr	tr
Ukrainian	Uk	uk

ABSTRACTS

DICTIONARIES, DIRECTORIES

1

[Handbook on the manufacture of food preserves.] Spravochnik po proizvodstvu konservov. [Book]
Rogachev, V. I.
653pp. (1974) [19 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 2.37r

This is Vol. IV in the series "Handbook of Food Preservation". It includes the following chapters: Raw materials for fruit and vegetable preservation (pp. 4-86); Technology of vegetable raw material preservation (pp. 86-597); and Chemical, technical and bacteriological control (pp. 598-649). [See FSTA (1972) 4 1E2 for Vol. III.] STI

2

Research and development. Industrial food research in the countries of the European Community. [Book]
Commission of the European Communities
EUR 5181e, 383 + 356pp. (1975) [En] Boite Postale 1003, Luxembourg; Office for Official Publications of the European Communities

Part I (383pp.) of this book documents the scope of industrial food research in the individual countries of the EEC and classifies the principal research centres by country (pp. 7-229). The annexes include lists of scientific publications concerned with industrial food research (pp. 295-329), and topics suitable for Community research projects (pp. 335-379). Part II (356pp.), entitled Directory of research centres, is an English translation of parts of the Directory published in French in 1974 [see FSTA (1975) 7 6A282]. It includes a register of food research centres participating in the enquiry, listed by country (pp. 12-52), and information on the field of activity and principal research themes of individual research centres (pp. 54-311). Classification of the centres by discipline, techniques, raw materials, and processed products is given in full in the 1974 French edition. AL

3

Production yearbook: volume 28-2: 1974. [Book]
Food & Agriculture Organization
FAO Production Yearbook vii + 193pp. (1975) [En, Fr, Es] Rome, Italy

This 2nd part of the yearbook contains data on the average annual producer, wholesale, export and import prices of agricultural products in major producing and trading countries in 1969-1973. Also included are tables of index numbers of retail food prices and of cost of living in different countries for 1964-1973, based on 1970 = 100. [See FSTA (1976) 8 4D80 for part I.] AL

4

Food products formulary. Vol. 2. Cereals, baked goods, dairy and egg products. [Book]
Tressler, D. K.; Sultan, W. J.
xii + 431pp. ISBN 0-87055-170-1 (1975) [En] Westport, Connecticut, USA; AVI Publishing Co. Inc. Price $37 (US), $38 (Foreign)

This second volume in the series [see FSTA (1975) 7 4G235 for Vol. 1] presents formulas and procedures for the manufacture of cereal products, baked goods, dairy products and egg products. The formulas and methods given are used in commercial production or in institutional kitchens. Chapters are: Cereals and bakery products (pp. 1-184); Speciality breads and related products (pp. 185-259); Dairy products (pp. 260-370); and Egg products (pp. 371-385). Where appropriate, reference is made to the source of formulas and procedures, e.g. books published by the AVI Publishing Co. Inc., university publications. An appendix gives: Standards of identity for bakery products (pp. 387-394); Standards of identity for mayonnaise and French dressing (pp. 394-395); and Federal and state standards for the composition of certain milk products (pp. 396-420). JA

5

Dictionary of nutrition and food technology. [Book]
Bender, A. E.
Ed. 4 250pp. ISBN 0-408-001437 (1975) [En] London, UK; Butterworth & Co. (Publishers) Ltd. Price £4.74 [Dep. of Nutr., Queen Elizabeth Coll., Univ. of London, UK]

This updated and expanded edition of this comprehensive dictionary of nutrition and food technology gives brief definitions and explanations of a wide range of terms, products, trade names, etc. of importance in nutrition and food science; the book is intended both for specialists in these fields, and for workers in other disciplines. Tables of recommended daily intakes of various nutrients, and the nutrient contents of average portions of various foods are included. AJDW

6

Guide to English language publications in food science and technology. [Book]
Green, S.
Ed. 4, 133pp. ISBN 0-900379-20-0 (1975) [En]
London, UK; Food Trade Press Ltd. Price £5

This publication lists the food science and technology literature under the following headings: Bibliographies (p. 3); Abstracts and indexes (p. 4); Surveys and reviews (p. 5); Directories, handbooks, data, etc. (pp. 6-7); Dictionaries, etc. (p. 7-8); Conferences (pp. 8-13); Food products in general (pp. 13-16); Dairy products (pp. 16-23); Sugars, chocolate and confectionery, honey (pp. 24-26); Cereals (pp. 26-31); Bakery products (pp. 31-32); Oils and fats (pp. 33-34); Fruits and vegetables (pp. 34-39); Meat and meat products (pp. 40-43); Fish and fishery products (pp. 43-46); Beverages (pp. 46-49); Speciality products (pp. 49-50); Proteins and related compounds (pp. 50-52); Additives (pp. 52-56); Preservation (pp. 56-63); Processing (pp. 64-68); Composition, properties and quality (pp. 68-75); Food inspection and grading (pp. 75-76); Laboratory testing (p. 76); Quality control (p. 77); Analysis (pp. 77-80); Microbiology (pp. 80-83); Toxicology (pp. 83-85); Hygiene (pp. 85-87); Waste disposal (pp. 87-89); Storage (pp. 89-91); Infestation control (pp. 91-92); Food standards (pp 92-93); Legislation (p. 94); Nutrition (pp. 95-98); Packaging (pp. 98-99); Economics (pp. 99-101); Statistics (pp. 101-102); Patent collections (pp. 102 105); Organizations issuing technical reports (p. 106); and Periodicals (p. 107). A 23pp. author index is included. VJG

7

IFT world directory & guide. [Book]
United States of America, Institute of Food Technologists
378pp. (1976) [En] Chicago, Illinois, USA

This directory and guide includes: the IFT select buyers' guide (pp. 41-104) covering ingredients, food processing systems and equipment, packaging equipment and supplies, laboratory equipment and supplies, other products and services, and directory of suppliers; IFT's 1975 regional guide to testing laboratories and consultants (pp.120-137); and IFT style guide for research papers (pp. 139-142, 4 ref.). The second part contains a directory of members, IFT divisions and affiliation listing. AL

8

Binsted's directory of food trade marks and bran names. [Book]
Anon.
Ed. 5, 468pp. (1975) [En] London, UK; Food Trade Press Ltd. Price £13

See FSTA (1969) 1 1D1 for Ed. 4.

9

[Lexicon of the cheese trade.] Ostehandelens leksikon. [Book]
Roed, G. (Editor)
103pp. (1976) [Da] Copenhagen, Denmark; Ostehandlerforening Price 40.00kr

This well illustrated book is an updated version of the 1961 lexicon of the cheese trade. The introductory section (10 pp.) gives a historical account of the development of cheese in Europe. This is followed by the lexicon proper, which lists all the worlds cheeses alphabetically under their usual names, with short explanations; approx. 1500 cheeses are mentioned. The final sections of th book include technical information on cheesemaking, tabulated data on defects in cheese (grouped under appearance, colour, texture, consistency and odour/flavour) and their causes, and a nutritional table covering cheeses of different fat/protein compositions. ADL

10

Dictionary of agriculture. Wörterbuch der Landwirtschaft. [Book]
Haensch, G.; Haberkamp de Anton, G.
Ed. 4, 1024pp. ISBN 3-405-10950-7 (1975) [De, En, Fr, Es, Ru] Munich, Federal Republic of Germany; BLV Verlagsgesellschaft mbH Price DM128

This 4th edition of this comprehensive 5-language dictionary of agriculture includes a total of 11 098 terms, broken down into 17 sections: Food and agriculture, general terms; Agricultural training, research and information; Administration and legislations; Economics and sociology of agriculture; Processing of agricultural products; Soil science; General biology; Genetics; Crop farming, general part; Crop farming, special part; Grassland management; Horticulture; Viticulture; Animal breeding, general part; Animal breeding, special part; Farm buildings; and Agricultural machinery. Within each section, entries are arranged in alphabetical order of the German terms. Full subject indexes are given for the 5 languages covered, together with an index of Latin names of plants, animals and microorganisms. AJDW

11

[Provisional directory of Latinamerican centres for the study of food technology and human nutrition.] Directorio provisional de los centros Latinoamericanos de investigacion en tecnologia alimentaria y nutricion humana. [Book]
Visscher, A. de (Food & Agriculture Organization)
xxi + 95pp. (1976) [Es] Santiago, Chile; Oficina Regional para America Latina

This directory presents information on Latin American research centres in food technology and human nutrition. Information presented includes: address of centre, name of director, status, number

of personel (professional), technical and administrative), budget, and principal areas of investigation. A code system permits classification by country, legal status, raw materials and products investigated. VJG

12

European confectionery and bakery products. Edition 1973-'74. [Book]
Anon.
192pp. ISBN 90-6156-506-5 (1975) [En]
Hilversum, Netherlands; Stamex BV Publishing Co.

This 1st edition of the directory contains details of approx. 1600 firms manufacturing bakery products and confectionery in 19 European countries. Details given include: name of firm, address, telephone and telex numbers, number of employers, names of directors and managers, names of subsidiary companies, and types of product manufactured. The book is divided into 19 sections by country, and firms are listed alphabetically by name in each section. Names and addresses are also given of various national organizations connected with the confectionery and bakery products industry. JA

13

The Barbara Kraus guide to fiber in foods. [Book]
Kraus, B.
xv + 205pp. (1975) [14 ref. En] New York, USA; New American Library Inc. Price $1.50

A short introductory section (pp. vii-xv) discusses the nutritional and clinical significance of fibre in foods, methods of determining fibre, the energy value of fibre-containing foods, foods containing significant amounts of fibre, and the addition of fibre to the diet. The major part of the book (pp. 1-204) consists of tables giving the crude fibre and calorie contents of many basic foods and manufactured products. Food are listed alphabetically; cross references are included to assist in findings items known by >1 name. Values given are based on USDA figures, and data provided by manufacturers and processors. JA

14

[Dictionary of packaging.] Fachwörterbuch Verpackung. [Book]
Hoffmann, J. P. A. (Editor)
843pp. (1975) [De, En, Fr, It, Es, Ru]
Heidelberg, Federal Republic of Germany; Verlag für Fachliteratur GmbH Price DM112

This comprehensive 6-language dictionary of packaging includes a total of 4128 terms covering all major aspects of packaging (materials, pack types, equipment, processes, etc.). The enteries are arranged in alphabetical order of the German terms. Full English, French, Italian, Spanish and Russian indexes are given. AJDW

GENERAL

15

FAO Commodity Review and Outlook 1974-1975. [Book]
Food & Agriculture Organization
257pp. (1975) [En] Rome, Italy

This review follows a similar layout to previous issues, being divided into chapters entitled: General commodity situation and outlook; Towards world food security: International approaches to food stocks 1945-1975; and Situation and outlook by commodities. [See FSTA (1975) **7** 1D11 for previous report.] ADL

16

Food & man. [Book]
Lowenberg, M. E.; Todhunter, E. N.; Wilson, E. D.; Savage, J. R.; Lubawski, J. L.
Ed. 2, xi + 459pp. ISBN 0-471-54961-4 (1974) [many ref. En] London, UK; John Wiley & Sons, Inc. Price £6.40 [State Univ., Pennsylvania, USA]

This book is intended to be used by the college student who has no previous background in the physical or chemical sciences, and so the concepts are simply stated. 3 new chapters have been added to this revised edition. All chapters have been brought up to date with the inclusion of new material made available since the first edition was written in 1967. Chapters included are: Food patterns - origins and development from early times through Roman times (pp. 1-47); Food patterns - origins and development from medieval times through the 19th century (pp. 49-115, many ref); Food habits and foodways (pp. 117-162, 63 ref.); Development of man's knowledge of nutrition (pp. 163-192, 20 ref.); Food, man, and religion (including Christianity, Judaism, Islam, Hinduism and Buddhism) (pp. 193-231, 29 ref.); Food, man, and the influence of business (pp. 233-267, 44 ref.); Chronic hunger (pp. 269-292, 29 ref.); Malnutrition and disease (pp. 293-349, 81 ref.); and Programmes to improve nutrition (pp. 351-430, many ref.). Appendices included are: Teaching hints (p. 433); Glossary (pp. 434-435); Textbooks on nutrition (p. 436); Books for general reference (pp. 437-442); Addresses for source materials (pp. 443-444); and Films for food and man (pp. 445-447). VJG

17

[Proceedings of the VIII International Zootechnical symposium: "Intensification of animal production and problems of animal reproduction", held in Milan on 15-17 April, 1973.] Atti dell' VIII Simposio Internazionale di Zootecnia: 'Intensificazione della produzione zootecnica e problemi della riproduzione animale', Milano, 15-17 Aprile 1973. [Conference proceedings]

Italy, Societa Italiana per il Progresso della Zootecnica
1057pp. (1974) [It, En, Es] Milan, Italy; Societa Italiana per il Progresso della Zootecnica Price L12 000

The full text is given of papers presented at this symposium. Papers giving data for milk quality or carcass quality include: Artificial insemination as a method for zootechnical improvement, with special reference to Italian Brown cattle, by G. Santus (pp. 169-191, It, en); Some productive aspects in Pekin ducks, by M. R. Shalash, S. E. M. F. Nawito, Fahmy, M. R. A. & M. A. Abdel-Razik (pp. 434-451, 23 ref., En); Contribution of medicated feed additives to the production of animal protein, by J. F. Figueroa & J. S. Kiser (pp. 588-597, 12 ref., En); Synchronization of oestrus in lactating ewes: effect of hormone treatment on milk production, by S. Casu, P. Cappai & G. Manunta (pp. 719-727, 2 ref., It, fr, en); and Optimalization of decision in breeding within AI breeding programmes of dual purpose cattle, by H. J. Langholz (pp. 759-773, 17 ref., En). A further 2 papers are abstracted separately in FSTA, and appear in the author index under **Italy**, Societa Italiana per il Progresso della Zootecnia [Symposium]. AJDW

18

1st world congress on genetics applied to livestock production, 7-11 October 1974. I. Plenary sessions. [Conference proceedings]
Spain, Sindicato Nacional de Ganaderia de Espana
958pp. ISBN 84-400-0727-2 (1974) [many ref. En, Fr, Es, De] Madrid, Spain; Editorial Garsi

The full text is given of papers presented at this symposium, including the following papers giving data for milk quality, egg quality and/or carcass quality: Genotype by environment interaction in the context of animal breeding, by S. P. Wilson (pp. 393-412, 60 ref., En, es, fr); The Japanese quail, an avian model for the study of inbreeding effects and homeostasis, by E. Boesiger (pp. 511-521, 20 ref., Fr, en, de); The aims of breeding in dairy cattle, by E. P. Cunningham (pp. 531-539, 19 ref., En, es, fr); Reliable phenotypic and genetic parameters in dairy cattle, by K. Maijala & M. Hanna (pp. 541-563, 74 ref., En, fr, de); Improvement of beef-breeding by selection, by B. Lindhe (pp. 655-669, 40 ref., En, fr, es); Performance testing for beef characteristics, by W. H. E. Lewis & D. M. Allen (pp. 671-679, 20 ref., En, fr, es); Selection for crossbred performance in pigs, by W. E. Rempel (pp. 849-858, 23 ref., En, es, de); Crossbreeding in pigs, by P. Sellier (pp. 859-871, 34 ref., Fr, en, es); Genotype × environment interactions in pigs, by A. J. Kempster (pp. 873-884, 32 ref., En, es, fr); and Multi-trait selection and egg production in chickens, by A. W. Nordskog (pp. 917-924, 16 ref., En, fr, de). A further 7 papers are abstracted separately in FSTA, and appear in the author index under **Spain**, Sindicato Nacional de Ganaderia de Espana [Symposium]. [See also following abstr.] AJDW

19

1st world congress on genetics applied to livestock production, 7-11 October, 1974. II. Round Tables. [Conference proceedings]
Spain, Sindicato Nacional de Ganaderia de Espana
460pp. ISBN 84-400-0759-0 (1974) [many ref. En, Fr, Es, De] Madrid, Spain; Editorial Garsi

The full text is given of papers presented at this symposium. Papers including data for milk and/or carcass quality included: Progeny testing for beef characteristics, by D. E. Steane (pp. 129-141, 3 ref., En, fr, de); and Crossbreeding of cattle in India. Results, aims and objectives of All-India Coordinated Research Project on Dairy Cattle Breeding, by P. N. Bhat (pp. 237-252, 14 ref., En). 2 further papers are abstracted separately in FSTA, and appear in the author index under **Spain**, Sindicato Nacional de Ganaderia de Espana [Symposium]. [See also preceding and following abstr.] AJDW

20

1st world congress on genetics applied to livestock production, 7-11 October 1974. III. Contributed papers. [Conference proceedings]
Spain, Sindicato Nacional de Ganaderia de Espana
1235pp. ISBN 84-400-0842-2 (1974) [many ref. En, Fr, Es, De] Madrid, Spain; Editorial Garsi

The full text is given of papers presented at this symposium. Papers giving data for milk, egg and/or carcass quality include: Egg albumen polymorphisms in some fowl populations of small size, by A. Furtunescu, D. Mitrofan & R. Radu (pp. 45-51, 25 ref., En, fr, es); Relation between polymorphic proteins of blood serum of cattle and important traits of performance, by J. Kliment (pp. 231-233, En, fr, es); Biochemical-genetic variability in specific proteins of cows' milk, by B. Senft, F. Klobasa, F. Meyer & U. von Manteuffel (pp. 259-262, De, en, es); The relation between the transferrin locus and carcass characteristics in Cuban Charolais cattle, by J. Joffre, M. H. Fernandez, A. Granado, V. Berovides, R. Ronda & M. Rivas (pp. 335-341, 11 ref., Es, en); Genetic relations between growth performance and muscle metabolism of rabbits, by J. Ouhayoun, P. Rouvier & B. Poujardieu (pp. 521-528, 12 ref., Fr, en, es); Accuracy of estimation of breeding value using simplified milk recording systems, by O. Madsen & L. G. Christensen (pp. 585-591, 5 ref., En); [Continued in following abstr.] AJDW

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1st world congress on genetics applied to livestock production, 7-11 October 1974. III. Contributed papers. [Conference proceedings]
Spain, Sindicato Nacional de Ganaderia de Espana
1235pp. ISBN 84-400-0842-2 (1974) [many ref. En, Fr, Es, De] Madrid, Spain; Editorial Garsi

[Continued from preceding abstr.] Inbreeding level and specific combining ability in a Bavarian Simmental population, by J. Lederer, H. Bogner &

Averdunk (pp. 593-600, 4 ref., De, en, es); Appraisal of cow (Bos indicus) × yak (Bos grunniens) crossbreeding work in cold and elevated regions of Himachal Pradesh (India) by H. R. Kalia (pp. 723-730, 1 ref., En, de, es); Relation between beef production traits and calving performance in 2 breeds of dual-purpose cattle, by M. Hansen (pp. 749-754, 7 ref., En, de, es); Crossing of Aragon with Finnish sheep and other meat breeds, by M. E. Diaz, M. V. Ortiz & F. Colmer-Rocher (pp. 941-949, 13 ref., Es, en, fr); Choosing ram replacements for South Australian sheep flocks, by C. H. S. Dolling, J. E. Stafford & J. R. W. Walkley (pp. 955-961, 4 ref., En, fr, es); Estimation of genetic parameters of milk production in Sardinian ewes according to lactation number, by S. Casu, R. Carta & J. C. Flamant (pp. 969-972, Fr, en, es); Genotype and mating system/environment interactions for production traits in sheep, by W. D. Hohenboken, W. H. Kennick & R. Bogart (pp. 1001-1005, 2 ref., En, fr, es); Preliminary data on the longitudinal conformation of the Longissimus dorsi muscle in pigs, by Z. Osinska, Z. Michalski & H. Dunies (pp. 1117-1119, 6 ref., En, de, es); and Predicted and realised improvement during 3 years of selection for shell quality, by W. F. van Tijen & A. R. Kuit (pp. 1225-1230, 4 ref., En, de, fr). A further 15 papers are abstracted separately in FSTA, and appear in the author index under Spain, Sindicato Nacional de Ganaderia de Espana [Symposium]. [See also preceding abstr.] AJDW

22

Production yearbook. [Book]
Food & Agriculture Organization
***FAO Production Yearbook* 28-1**, xxi + 328pp. (1974) [En, Fr, Es] Rome, Italy

The yearbook contains data for 1961-1965 and average annual figures for individual yr from 1972 to 1974. Scope of information covered is similar to that of the 1973 yearbook [see FSTA (1975) **7** 11D300]. However, unlike previous issues this yearbook is published in 2 sections. Part I includes information on land, population, statistical summary of world and regional agricultural production, data on individual crops, livestock numbers and products (including average carcass wt. of slaughtered animals), means of production, and index numbers of food and agricultural production. A long-term series (1963-1974) covers crops grown mainly for the production of oil. AL

23

Trade yearbook; volume 28: 1974. [Book]
Food & Agriculture Organization
FAO Trade Yearbook xl + 570pp. (1975) [En, Fr, Es] Rome, Italy

This yearbook includes data on annual import and export quantities and values for 1969-1974 of individual agricultural products. They are tabulated as total world figures as well as for each continent and for individual countries. Data on the value of agricultural trade for 1968-1973 are also tabulated, by country. [See FSTA (1975) **7** 12D342 for 1973 Trade Yearbook.] AL

24

Physioengineering principles. [Book]
Merva, G. E.
ix + 353pp. ISBN 0-87055-181-7 (1975) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co. Inc. Price $15 soft cover & $32 hard cover (USA); $16 soft cover & $33 hard cover (Foreign) [Michigan State Univ., East Lansing, Michigan, USA]

Physioengineering describes an area of study involving the traditional fields of soil science, plant science, plant physiology and agricultural engineering. The material presented in this book is the result of an effort to teach the essential concepts of physioengineering in terms of the soil-plant-atmosphere continuum, using selected basic concepts from the physical sciences strengthened with applications from the plant environment. Chapters are: Fundamental concepts (pp. 1-37, 6 ref.); The green plant (pp. 38-77, 17 ref.); Elementary physiological concepts of the green plant (pp. 78-112, 14 ref.); Properties of soil (pp. 113-148, 7 ref.); Radiant energy in the plant environment (pp. 149-199, 10 ref.); Heat flow in the soil (pp. 200-234, 19 ref.); Water potential in the plant environment (pp. 235-271, 3 ref.); Environmental control and models relating to control of the environment (pp. 272-303, 9 ref.); and Water movement in soil (pp. 304-335, 7 ref.). 3 appendices are included: Fourier series modeling of periodic phenomena (pp. 336-341); Transformations from cartesian to cylindrical coordinates (pp. 342-346); and conversion factors (pp. 347-348). JA

25

Food for life. [Book]
Deatherage, F. E.
xii + 422pp. ISBN 0-306-30816-9 (1975) [En] New York, USA; Plenum Press Price $23.40 [Dep. of Biochem., Ohio State Univ., Columbus, Ohio, USA]

This book is intended to serve as a fundamental text for students and general readers; it defines the interacting principles of the biological, physical and social sciences that determine how food is produced, processed, distributed and consumed. Chapters are: Some characteristics of biological organisms (pp. 5-9); Cells, the fundamental biological units (pp. 11-30); Environmental conditions for life (pp. 31-65); Nutrition (pp. 67-109); What is our food made of? (pp. 111-161); The separation and utilization of nutrients from the multiplicity of substances naturally present in foods (pp. 163-186); The biology of some food organisms (pp. 187-243); Food spoilage and the requirements for preservation and distribution (pp. 245-281); Economic and social conditions controlling the supply and utilization of food (pp. 283-316); Government regulation of food (pp. 317-350); and

World population growth and future food supplies (pp. 351-373). An appendix (pp. 375-393) gives food composition tables. JA

26

Trace substances and health. A handbook. Part I. [Book]
Newberne, P. M. (Editor)
ix + 398pp. ISBN 0-8247-6341-6 (1976) [many ref. En] New York, USA; Marcel Dekker Inc. Price FS120 [Massachusetts Inst. of Tech., Cambridge, Massachusetts, USA]

This book deals with the broad aspects of toxicology which are posing practical problems to present day society. It considers the effect on the human body of trace substances which enter the body either intentionally or unintentionally. It should be particularly useful to researchers, physicians, public health officials, agronomists and veterinarians. Chapters included are: Enterotoxin-mediated diseases, by W. R. Beisel (pp. 1-66, 277 ref.); Mycotoxins, by R. C. Shank (pp. 67-158, 422 ref.); Pesticides, by F. D. Aldrich & J. F. Gooding (pp. 159-243, 257 ref.); Food chemicals and food additives, by H. F. Kraybill (pp. 245-318, 167 ref.); and Trace elements and health, by D. J. Horvath (pp. 319-356, 137 ref.). The last chapter covers the following trace elements: Fe, I, Se, Mo, Mn, F, Cu, Ni, Cr, Co, Zn, Cd, Hg and Pb. VJG

27

The chemistry and biochemistry of plant proteins. Proceedings of the Phytochemical Society Symposium, University of Ghent, Belgium, September, 1973. [Conference proceedings]
Harborne, J. B.; Sumere, C. F. van (**United Kingdom**, Phytochemical Society) (Editors)
xiii + 326pp. ISBN 0-12-324668-7 (1975) [many ref. En] London, UK; Academic Press Inc. (London) Ltd. Price £11.60 [Dep. of Bot., Univ., Reading, UK]

This book constitutes No. 11 in the series Annual Proceedings of the Phytochemical Society and contains 10 papers presented at the symposium: Amino acid sequence analysis of proteins, by D. Boulter & J. A. M. Ramshaw (pp. 1-30, many ref.); Immunochemical investigations of plant proteins, by J. Daussant (pp. 31-69, many ref.); Properties of and physiological changes in storage proteins, by H. Stegemann (pp. 71-88, 22 ref.); The proteins of barley, by G. Preaux & R. Lontie (pp. 89-111, 66 ref.); Mechanism of protein synthesis in higher plants, by O. Ciferri (pp. 113-135, many ref.); The biogenesis of plant mitochondria, by C. J. Leaver (pp. 137-165, 102 ref.); The biogenesis of chloroplasts, by B. Parthier, R. Krauspe, D. Munsche & R. Wollgiehn (pp. 167-210, many ref.); Plant proteins and phenolics, by C. F. van Sumere, J. Albrecht, A. Dedonder, H. de Pooter & I. Pe (pp. 211-264, many ref.); Protein sweeteners, by G. E. Inglett (pp. 265-280, 26 ref.); and Proteins and taxonomy, by J. G. Vaughan (pp. 281-298, 44 ref.). Author and subject indexes are included. JA

28

Elementary food science. [Book]
Nickerson, J. T. R.; Ronsivalli, L. J.
viii + 368pp. ISBN 0-87055-194-9 (1976) [83 ref. En] Westport, Connecticut, USA; AVI Publishing Co., Inc. Price US $25.00 Foreign $26.00 [Dep. of Nutr. & Food Sci., Massachusetts Inst. of Tech., Cambridge, Massachusetts, USA]

This book is directed at students in their final year of high school and first year university students. It contains the following sections: Interrelated food science topics (pp. 1-83), with chapters on Why food science?, nutrition, sanitary handling of foods, regulatory agencies (USA), food additives, and food-borne diseases; Causes of food changes (pp. 84-110), covering microbial activity, enzyme reactions, and chemical reactions; Food processing methods (pp. 111-171), with chapters on heating, drying, refrigeration at temp. above freezing, freezing, and addition of chemicals; and Handling and processing of foods (pp. 172-356), with chapters on meat, dairy products, poultry and eggs, fish and shellfish, cereal grains, bakery products, vegetables, fruits, sugar, and fats and oils. An 8pp. index is included. AL

29

Water relations of foods. Proceedings of an international symposium held in Glasgow, September, 1974. [Conference proceedings]
Duckworth, R. B. (International Union of Food Science & Technology) (Editor)
xviii + 716pp. ISBN 0-12-223150-3 (1975) [many ref. En] London, UK; Academic Press Inc. (London) Ltd. Price £17.50 [Dep. of Food Sci. & Nutr., Univ. of Strathclyde, Glasgow, UK]

The aim of this book, a volume in the Food Science and Technology Series of Monographs, is to make available the information presented at the symposium which dealt comprehensively with all major aspects of the condition, properties and behaviour of the compositional water of foods. The book is divided into the following 7 sections, each section containing several papers: Water and its molecular interaction with other constituents of biological systems (pp. 1-135); Methods and criteria used in the study of water in foods (pp. 137-269); Water in relation to the behaviour of micro-organisms (pp. 271-361); Influences of water on enzyme action in foods (pp. 363-413); Non-enzymic chemical changes at low and intermediate moisture contents (pp. 415-474); Effects associated with freezing and thawing (pp. 475-556); and Aspects of the condition and properties of water in relatively moist food materials (pp. 557-662). Individual papers are: Water, ice and solutions of simple molecules, by F. Franks (pp. 3-22, 45 ref.); Water-carbohydrate interactions, by A. Suggett (pp. 23-36, 30 ref.); Water-phospholipid interactions, by H. Hauser (pp. 37-71, 58 ref.); Protein hydration - its role in stabilizing the helix conformation of the protein, by D. Eagland (pp. 73-92, 42 ref.); [continued in following abstr.] JA

30

Water relations of foods. Proceedings of an international symposium held in Glasgow, September, 1974. [Conference proceedings]
Duckworth, R. B. (International Union of Food Science & Technology) (Editor)
xviii + 716pp. ISBN 0-12-223150-3 (1975) [many ref. En] London, UK; Academic Press Inc. (London) Ltd. Price £17.50 [Dep. of Food Sci. & Nutr. of Strathclyde, Glasgow, UK]

[Continued from preceding abstr.] The physical properties of water associated with biomacromolecules, by I. D. Kuntz Jr. (pp. 93-109, 36 ref.); Water in plant tissues and frost hardiness, by M. J. Burke, M. F. George & R. G. Bryant (pp. 111-135, 50 ref.); Recent advances in techniques for the determination of sorption isotherms, by S. Gal (pp. 139-154, 81 ref.); Interpretation of sorption data in relation to the state of constituent water, by T. P. Labuza (pp. 155-172, 43 ref.); Solvent versus non-solvent water in starch-alcohol-water systems, by F. Duprat & A. Guilbot (pp. 173-182, 14 ref.); Solvent versus non-solvent water in casein-sodium chloride-water systems, by S. Gal (pp. 183-191, 20 ref.); Differential thermal analysis and differential scanning calorimetry in the study of water in foods, by D. Simatos, M. Faure, E. Bonjour & M. Couach (pp. 193-209, 47 ref.); Dielectric properties of foods in relation to interactions between water and the substrate, by M. Kent & A. C. Jason (pp. 211-231, 26 ref.); Some applications of wide-line and pulsed nuclear magnetic resonance in investigations of water in foods, by M. P. Steiberg & H. Leung (pp. 233-248, 37 ref.); Electron microscopy in the study of immobilized water, by W. D. Powrie & M. A. Tung (pp. 249-269, 62 ref.); Xerophilic fungi and the spoilage of foods of plant origin, by J. I. Pitt (pp. 273-307, 109 ref.); [continued in following abstr.]. JA

31

Water relations of foods. Proceedings of an international symposium held in Glasgow, September, 1974. [Conference proceedings]
Duckworth, R. B. (International Union of Food Science & Technology) (Editor)
xviii + 716pp. ISBN 0-12-223150-3 (1975) [many ref. En] London, UK; Academic Press Inc. (London) Ltd. Price £17.50 [Dep. of Food Sci. & Nutr., Univ. of Strathclyde, Glasgow, UK]

[Continued from preceding abstr.] The significance of water activity for micro-organisms in meats, by L. Leistner & W. Rödel (pp. 309-323, 68 ref.); The effect of water activity on the heat resistance of bacteria, by J. E. L. Corry (pp. 325-337, 36 ref.); The influence of relative humidity on the thermal resistance of mould spores, by M. Lubieniecki-von Schelhorn & R. Heiss (pp. 339-346, 6 ref.); Water and micro-organisms in foods - a synthesis, by D. A. A. Mossel (pp. 347-361, many ref.); Enzymic reactions in low moisture foods, by K. Potthast, R. Hamm & L. Acker (pp. 365-377, 26 ref.); Water activity in relation to the thermal inactivation of enzymic proteins, by J. L. Multon & A. Guilbot (pp. 379-396, 37 ref.); Activity of enzymes in partially frozen aqueous systems, by O. Fennema (pp. 397-413, 66 ref.); The influence of water content on non-enzymic browning reactions in dehydrated foods and model systems and the inhibition of fat oxidation by browning intermediates, by K. Eichner (pp. 417-434, 37 ref.); Free radicals in low moisture systems, by M. Karel (pp. 435-453, 68 ref.); Oxidative changes in foods at low and intermediate moisture levels, by T. P. Labuza (pp. 455-474, 53 ref.); The physico-chemical environment during the freezing and thawing of biological materials, by A. P. MacKenzie (pp. 477-503, 32 ref.); The effects of freezing and thawing on food quality, by W. Partmann (pp. 505-537, many ref.); [continued in following abstr.] JA

32

Water relations of foods. Proceedings of an international symposium held in Glasgow, September, 1974. [Conference proceedings]
Duckworth, R. B. (International Union of Food Science & Technology) (Editor)
xviii + 716pp. ISBN 0-12-223150-3 (1975) [many ref. En] London, UK; Academic Press Inc. (London) Ltd. Price £17.50 [Dep. of Food Sci. & Nutr., Univ. of Strathclyde, Glasgow, UK]

[Continued from preceding abstr.] Reaction kinetics in partially frozen aqueous systems, by O. Fennema (pp. 539-556, 54 ref.); Physico-chemical studies of water in meat, by J. M. V. Blanshard & W. Derbyshire (pp. 559-571, 26 ref.); Some effects of water in wheat flour doughs, by N. W. R. Daniels (pp. 573-586, 20 ref.); Interactions between water and surface active lipids in food systems, by N. Krog (pp. 587-611, 29 ref.); The lowering of water activity by order of mixing in concentrated solutions, by D. P. Bone, E. L. Shannon & K. D. Ross (pp. 613-626, 8 ref.); The influence of water on textural parameters in foods at intermediate moisture levels, by J. G. Kapsalis (pp. 627-637, 18 ref.); Physico-chemical modification of the state of water in foods - a speculative survey, by M. Karel (pp. 639-657, 37 ref.); and Envoi, by M. V. Tracey (pp. 659-662). Author and subject indexes are included. JA

33

Guide lines for the preparation of tables of food composition. [Book]
Southgate, D. A. T.
57pp. ISBN 3-8055-1780-7 (1974) [many ref. En] Basle, Switzerland; S. Karger Price DM18 [Dunn Nutr. Lab., Univ., Cambridge, UK]

This book summarizes the results of the meetings of a working party set up in 1970 by the Group of European Nutritionists, the aim of the working party being to discuss and develop the general principles which have to be considered in the preparation of national food composition tables. The book consists of 3 chapters: National food composition tables: general considerations and

introductory remarks, by J. C. Somogyi (pp. 1-5, 8 ref.); Guide lines for the preparation of tables of food composition, by D. A. T. Southgate (pp. 7-52, 119 ref.); and A brief history of British food composition tables, by E. M. Widdowson (pp. 53-57). JA

34

[Swiss food handbook. Methods for examination and evaluation of foodstuffs and items of utility. Vol. II. Ed. 5. 5th Supplement (1970).]
Schweizerisches Lebensmittelbuch. Methoden für die Untersuchung und Beurteilungen von Lebensmitteln und Gebrauchsgegenständen. Zweiter Band. Fünfte Auflage. 5. Lieferung (1970). [Book]
Switzerland, Schweizerische Lebensmittelbuchkommission; **Switzerland**, Eidgenössisches Gesundheitsamt
67pp. (1970) [De] Berne, Switzerland; Drucksachen- und Materialzentrale

This 5th supplement of the official handbook, which is being published in loose-leaf form over a period of several years and will contain a total of 58 sections, contains the following 4 sections (with indexes): Fruit juice-based, non-alcoholic beverages and soft drink powders (section 29, 10pp.); Beer and alcohol-free beer (section 31, 26pp.); Vinegar and vinegar-like products and the food use of some acids (section 34, 23pp.); and Additives used in brewing (section 39, 8pp.; a 6pp. revised version was published in 1974). [See FSTA (1969) **1** 4A102 for supplement 1, (1970) **2** 2A60 for supplement 2, (1970) **2** 5A183 for supplement 3, and (1970) **2** 12A374 for supplement 4.] JA

35

[Swiss food handbook. Methods for examination and evaluation of foodstuffs and items of utility. Vol. II. Ed. 5. 6th Supplement (1971).]
Schweizerisches Lebensmittelbuch. Methoden für die Untersuchung und Beurteilungen von Lebensmitteln und Gebrauchsgegenständen. Zweiter Band. Fünfte Auflage. 6. Lieferung (1971). [Book]
Switzerland, Schweizerische Lebensmittelbuchkommission; **Switzerland**, Eidgenössisches Gesundheitsamt
70pp. (1971) [De] Berne, Switzerland; Drucksachen- und Materialzentrale

This 6th supplement of the official handbook contains the following 3 sections (with indexes): Spirits (section 32, 24pp.); Artificial sweeteners (section 41, 13pp.); and Tea and herb tea (section 57, 33pp.). [See preceding abstr. for supplement 5.] JA

36

[Swiss food handbook. Methods for examination and evaluation of foodstuffs and items of utility. Vol. II. Ed. 5. 7th Supplement (1972).]
Schweizerisches Lebensmittelbuch. Methoden für die Untersuchung und Beurteilungen von Lebensmitteln und Gebrauchsgegenständen. Zweiter Band. Fünfte Auflage. 7. Lieferung (1972). [Book]
Switzerland, Schweizerische Lebensmittelbuchkommission; **Switzerland**, Eidgenössisches Gesundheitsamt
94pp. (1972) [De] Berne, Switzerland; Drucksachen- und Materialzentrale

This 7th supplement of the official handbook contains the following 3 sections (with indexes): Cereals and legumes (section 14, 25pp.); Drinking water and mineral water (section 27A - drinking water, section 27B - carbonated water, 57pp.); and Seasonings and table salt (section 37B - table salt and nitrite-based pickling salt, 12pp.). [See preceding abstr. for supplement 6.] JA

37

[Swiss food handbook. Methods for examination and evaluation of foodstuffs and items of utility. Vol. II. Ed. 5. 8th Supplement (1973).]
Schweizerisches Lebensmittelbuch. Methoden für die Untersuchung und Beurteilungen von Lebensmitteln und Gebrauchsgegenständen. Zweiter Band. Fünfte Auflage. 8. Lieferung (1973). [Book]
Switzerland, Schweizerische Lebensmittelbuchkommission; **Switzerland**, Eidgenössisches Gesundheitsamt
33pp. (1973) [De] Berne, Switzerland; Drucksachen- und Materialzentrale

This 8th supplement of the official handbook contains the following section (with an index): Fruits and vegetables (fresh and processed) (section 25, 33pp.). [See preceding abstr. for supplement 7.] JA

38

[Swiss food handbook. Methods for examination and evaluation of foodstuffs and items of utility. Vol. II. Ed. 5. 9th Supplement (1973).]
Schweizerisches Lebensmittelbuch. Methoden für die Untersuchung und Beurteilungen von Lebensmitteln und Gebrauchsgegenständen. Zweiter Band. Fünfte Auflage. 9. Lieferung (1973). [Book]
Switzerland, Schweizerische Lebensmittelbuchkommission; **Switzerland**, Eidgenössisches Gesundheitsamt
63pp. (1973) [De] Berne, Switzerland; Drucksachen- und Materialzentrale

This 9th supplement of the official handbook contains the following 3 sections (with indexes): Butter (section 6, 20pp.); Edible fats, edible oils, margarine (section 7B - margarine, 12pp.); and Milling products and starch (section 15, 31pp.). [See preceding abstr. for supplement 8.] JA

39

[Swiss food handbook. Methods for examination and evaluation of foodstuffs and items of utility. Vol. II. Ed. 5. 10th Supplement (1973).] Schweizerisches Lebensmittelbuch. Methoden für die Untersuchung und Beurteilungen von Lebensmitteln und Gebrauchsgegenständen. Zweiter Band. Fünfte Auflage. 10. Lieferung (1973).] [Book]
Switzerland, Schweizerische Lebensmittelbuchkommission; **Switzerland**, Eidgenössisches Gesundheitsamt
84pp. (1973) [De] Berne, Switzerland; Drucksachen- und Materialzentrale

This 10th supplement of the official handbook contains the following 3 sections (with indexes): Mayonnaise and salad dressings (section 8, 14pp.); Aniseed-containing spirits (section 33, 7pp.); and Preservatives and antioxidants - detection and determination in foods (section 44, 63pp.). [See preceding abstr. for supplement 9.] JA

40

[Swiss food handbook. Methods for examination and evaluation of foodstuffs and items of utility. Vol. II. Ed. 5. 11th Supplement (1973).] Schweizerisches Lebensmittelbuch. Methoden für die Untersuchung und Beurteilungen von Lebensmitteln und Gebrauchsgegenständen. Zweiter Band. Fünfte Auflage. 11. Lieferung (1973). [Book]
Switzerland, Schweizerische Lebensmittelbuchkommission; **Switzerland**, Eidgenössisches Gesundheitsamt
58pp. (1973) [De] Berne, Switzerland; Drucksachen- und Materialzentrale

This 11th supplement of the official handbook contains the following 2 sections (with indexes): Baking yeast (section 17, 7pp.); and Coffee and coffee substitutes (section 35, 51pp.). [See preceding abstr. for supplement 10, FSTA (1976) 8 3A168 for supplement 12, and (1976) 8 8A390 for supplement 13.] JA

41

Food for a future. The ecological priority of a humane diet. [Book]
Wynne-Tyson, J.
183pp. ISBN 0-7067-0142-9 (1975) [48 ref. En] London, UK; Davis-Poynter Ltd. Price £3.50

This book considers that physiologically man is not intended for a carnivorous or even an omnivorous diet, as evidenced by the chemistry of the human body and by dental characteristics. It considers the many myths that surround vegetarianism and stresses the importance of a humane diet as part of a more responsible way of life. Chapters included are: A vegetable love (pp. 9-15); The social obligation (pp. 16-29); The aberrant ape (pp. 30-51); To the cradle from the grave (pp. 52-58); Pathology or hygiene? (pp. 59-85); Values in perspective (pp. 86-121); The further step (pp. 122-132); Human or humane? (pp. 133-151); and as old as man (pp. 152-168). 3 appendices and a bibliography are included. VJG

42

Commercial food patents, U.S. 1975. [Book]
North, H. B.
299pp. (1976) [En] 812 South Ode Street, Arlington, Virginia 22204, USA; Oliver S. North Price $30

This book provides the food processor and food process equipment supplier with subject classified, fully-indexed abstracts of all US patents issued in 1975 on methods and processes for preparing commercially valuable human food products, human food compositions, apparatus for preparing commercial foods, and apparatus and methods for packaging specific foods. The abtracts are classified into the following chapters: Alcoholic beverages (pp. 1-10); Baking and bakery products (pp. 11-36); Breakfast cereals (pp. 37-38); Canning and preserving (pp. 39-46); Cereal grains and flours (pp. 47-58); Coffee and tea (pp. 59-64); Condiments, seasonings and flavourings (pp. 65-86); Confections (pp. 87-94); Dehydrated foods (pp. 95-98); Fats and oils (pp. 99-108); Fish (pp. 109-114); Freeze-dried and frozen foods (pp. 115-120); Fruits, vegetables and juices (pp. 121-134); Meat packaging and meat products (pp. 135-172); Milk and other dairy products (pp. 173-190); Poultry and egg products (pp. 191-200); Proteins and protein products (pp. 210-222); Shellfish (pp. 223-226); Snacks (pp. 227-230); Sugar (pp. 231-238); and Miscellaneous (pp. 239-246). Assignee, inventor and patent number indexes are included. [See FSTA (1976) 8 1G24 for 1974 issue.] VJG

43

Aroma research. Proceedings of the International Symposium on Aroma Research held at the Central Institute for Nutrition and Food Research TNO, Zeist, the Netherlands, May 26-29, 1975. [Conference proceedings]
Maarse, H.; Groenen, P. J. (**Netherlands**, Organization for Nutrition & Food Research TNO; **Netherlands**, Central Institute for Nutrition & Food Research TNO) (Editors)
245pp. ISBN 90-220-0573-9 (1975) [many ref. En] Wageningen, Netherlands; Centre for Agricultural Publishing & Documentation Price f55

This book, which consists of the papers and short communications presented at the symposium, is divided into the following 4 sections, each section containing several papers: Formation of aroma compounds in foods (pp. 11-100); Relation between instrumental and sensorial analysis (pp. 101-140); Factors governing the emanation of volatile compounds from an odorous substrate (pp. 141-194); and The future of aroma research (pp. 195-243). Individual papers and short contributions are: Biochemical formation of aroma components, by F. Drawert (pp. 13-39, 29 ref.), which is largely a review but also discusses recent studies of the biosynthesis of bitter substances in hops; Biogenesis of volatiles in fruit and vegetables, by R. Tressl, M.

Holzer & M. Apetz (pp. 41-62, 60 ref.); Formation of odorous compounds from hydrogen sulphide and methanethiol, and unsaturated carbonyls, by H. T. Badings, H. Maarse, R. J. C. Kleipool, A. C. Tas, R. Neeter & M. C. ten Noever de Brauw (pp. 63-73, 16 ref.), which reports experimental work on model systems, particularly studies of the reaction between H_2S and 2-alkenals; Aroma compounds formed by enzymic co-oxidation, by W. Grosch, G. Laskawy & K.-H. Fischer (pp. 75-83, 18 ref.), which reports on model studies of co-oxidation by lipoxygenases and of the volatile compounds (mainly carbonyl compounds) formed; Analysis of off-flavours in food, by J. M. H. Bemelmans & M. C. ten Noever de Brauw (pp. 85-93, 22 ref.), which reviews the subject and presents as an example the identification of chloroanisoles in a chicken feed suspected of causing musty taint in eggs; [continued in following abstr.] JA

44

Aroma research. Proceedings of the International Symposium on Aroma Research held at the Central Institute for Nutrition and Food Research TNO, Zeist, the Netherlands, May 26-29, 1975.
[Conference proceedings]
Maarse, H.; Groenen, P. J. (Netherlands, Organization for Nutrition & Food Research TNO; Netherlands, Central Institute for Nutrition & Food Research TNO) (Editors)
245pp. ISBN 90-220-0573-0 (1975) [many ref. En] Wageningen, Netherlands; Centre for Agricultural Publishing & Documentation Price f55

[Continued from preceding abstr.] Organic sulphur compounds as flavour constituents: reaction product of carbonyl compounds, hydrogen sulphide and ammonia, by H. Boelens, L. M. van der Linde, P. J. de Valois, J. M. van Dort & H. J. Takken (pp. 95-100, 15 ref.), which reports on studies by gas chromatography and MS of reaction products from model systems; The human instrument in sensory analysis, by E. P. Köster (pp. 103-110); Aroma values - a useful concept?, by M. Rothe (pp. 111-119, 12 ref.); Use of odour thresholds in sensorial testing and comparisons with instrumental analysis, by P. Salo (pp. 121-130, 15 ref.), which reviews studies on whisky; Techniques for assessing odour: uses and limitations, by D. G. Land (pp. 131-138, 22 ref.), the techniques discussed being semantic differential, free description, flavour profile and directed description with rating; Thiamine, thiamine diphosphate and 'aroma values', by J. Solms (pp. 139-140, 3 ref.) [see FSTA (1976) **8** 3G177 & 3G178]; Binding of volatile aroma substances to nutrients and foodstuffs, by H. G. Maier (pp. 143-157, 5 ref.), which discusses binding of the substances by amino acids, triglycerides, proteins, carbohydrates, and dry foodstuffs (milk powder, potato flakes, coffee extract, strawberry powder); Method for encapsulation of polar compounds in foods, by H. G. Peer & B. Hoogstad (pp. 159-166, 11 ref.), which discusses preparation of the capsules, their physical structure, measurement of their flavour retention and potential uses, e.g. in soup; [continued in following abstr.] JA

45

Aroma research. Proceedings of the International Symposium on Aroma Research held at the Central Institute for Nutrition and Food Research TNO, Zeist, the Netherlands, May 26-29, 1975.
[Conference proceedings]
Maarse, H.; Groenen, P. J. (Netherlands, Organization for Nutrition & Food Research TNO; Netherlands, Central Institute for Nutrition & Food Research TNO) (Editors)
245pp. ISBN 90-220-0573-9 (1975) [many ref. En] Wageningen, Netherlands; Centre for Agricultural Publishing & Documentation Price f55

[Continued from preceding abstr.] The effect of process conditions on aroma retention in drying liquid foods, by P. J. A. M. Kerkhof & H. A. C. Thijssen (pp. 167-192, 69 ref.); Reaction of vanillin with albumin, by J. H. Dhont (pp. 193-194); British and international legislative control of flavouring substances in food, by T. J. Coomes (pp. 197-202, 10 ref.); The future of aroma research, by F. Rijkens & H. Boelens (pp. 203-220, 42 ref.); Heterocyclics in flavour chemistry: five- and six-membered rings containing oxygen, nitrogen and sulphur atoms; monocyclic and condensed bicyclic components, by I. Flament (pp. 221-237, 81 ref.); Aromatization and international legislation, by H. van den Dool (pp. 239-242); and Wide-bore glass capillary columns in gas chromatography of aroma components, by H. T. Badings (p. 243). JA

46

Food: politics, economics, nutrition and research.
[Book]
Abelson, P. H. (United States of America, American Association for the Advancement of Science) (Editor)
v + 202pp. ISBN 0-87168-215-X & ISBN 0-7168-226-5 (1975) [many ref. En] Washington, DC, USA Price $12.95 (cloth) $4.95 (paper)

The material in this book originally appeared in Science, the weekly journal of the American Association for the Advancement of Science. Many articles were first published in the special issue of 9 May 1975 devoted to food, and others were published in issues randing from Jan. 1972 to March 1975. The topic is dealt with under the following headings: Food: economics, politics and social structure (pp. 1-63); Nutrition (pp. 65-83); Agricultural research (pp. 85-155); and Basic biology (pp. 157-195). Individual papers include (with FSTA reference for papers previously abstracted): The great food fumble, by F. H. Sanderson (pp. 1-7, 20 ref.; **7** 10D261); World food: a perspective, by T. T. Poleman (pp. 8-16, 36 ref.; **7** 10D273); Institutional obstacles to expansion of world food production, by P. R. Crosson (pp. 17-22, 19 ref.); Difficult issues underlying food problems, by H. Walters (pp. 22-28, 9 ref.; **7** 10D286); Energy use in the US food system, by J. S. Steinhart & C. E. Steinhart (pp. 33-42, 32 ref.; **6** 8A353); India: a perspective on the food situation, by J. D. Gavan & J. A. Dixon (pp. 49-57, 60 ref.; **7** 10D267); Agriculture in China, by G. F. Sprague (pp. 57-63; **7** 10J1529); Human

milk, nutrition, and the world resource crisis, by D. B. Jelliffe & E. F. P. Jelliffe (pp. 65-69, 27 ref.); Beyond economics and nutrition: the complex basis of food policy, by T. Dwyer & J. Mayer (pp. 74-78, 8 ref.; **7** 10D282); [continued in following abstr.] AL

47

Food: politics, economics, nutrition and research. [Book]
Abelson, P. H. (**United States of America**, American Association for the Advancement of Science) (Editor)
v + 202pp. ISBN 0-87168-215-X & ISBN 0-7168-226-5 (1975) [many ref. En] Washington, DC, USA Price $12.95 (cloth) $4.95 (paper)

[Continued from preceding abstr.] Management of famine relief, by J. Mayer (pp. 79-83, 11 ref.); Food production: technology and the resource base, by S. H. Wittwer (pp. 85-90, 55 ref.; **7** 10D283); International agricultural research, by N. Wade (pp. 91-95); Food science in developing countries, by N. L. Brown & E. R. Pariser (pp. 99-103, 20 ref.; **7** 11G725); and Crop protection to increase food supplies, by W. B. Ennis, Jr., W. M. Dowler & W. Klassen (pp. 110-115, 16 ref.). AL

48

[Outline of the science on food.] Zarys nauki o srodkach zywnosci. [Book]
Krauze, S.
563pp. (1975) [Po] Warsaw, Poland; Panstwowy Zaklad wydavnictw lekarskikh. Price 70zl

This book, intended as a textbook for students of pharmaceutical, food, technological and agricultural schools, includes the following chapters: Classification of nutrients (pp. 17-22); Organization of nutrition control in Poland (pp. 23-35); Milk (pp. 36-134); Dairy products (pp. 135-156); Fats and oils (pp. 157-228); Meat (pp. 229-256); Fish (pp. 257-264); Molluscs (pp. 264-265); Crustaceans (pp. 266-267); Animal parasites (pp. 267-274); Bacterial meat poisoning (pp. 274-277); Spoilage of meat and meat products (pp. 278-280); Meat products (pp. 281-284); Cereals (pp. 285-333); Flours (pp. 334-350); Baking processes (pp. 351-380); Food substitutes (pp. 381-398); Sweeteners (pp. 399-405); Fruit and vegetables (pp. 406-414); Mushrooms (pp. 415-422); Alcoholic beverages and other fermentation products (pp. 423-443); Food preservatives (pp. 444-475); Food colorants (pp. 476-494); Pesticides in food (pp. 495-506); Surface-active agents (pp. 507-522); Plastics (pp. 523-538); and Cosmetic (pp. 539-553). STI

NUTRITION

49

[Rational nutrition.] Ratsional'noe pitanie. [Book]
Union of Soviet Socialist Republics, Ministerstvo Zdravookhraneniya USSR
186 pp. (1974) [Ru] Kiev, USSR; Zdorov'iya. Price 1.20r

Scientific papers dealing with the problems of rational nutrition and nutrition from the point of view of health and disease prevention are included in the collection. Attention is paid to the problems of actual nutrition, and to the composition of food consumed by various age groups and professional groups. Physiological and hygienic problems of various kinds of foods are discussed as well as the chemical composition of food, its nutritive value and effects on metabolism. The influence of vitamins, minerals and enzymes administered experimentally is also covered. Problems of toxicity and pathogenity in nutrition, are also discussed. STI

50

Recommended dietary allowances. [Book]
United States of America, National Research Council, Food & Nutrition Board, Committee on Dietary Allowances; **United States of America, National Research Council, Food & Nutrition Board, Committee on Interpretation of the Recommended Dietary Allowances**
Ed. 8, v + 128pp. ISBN 0-309-02216-9 (1974) [many ref. En] Washington, DC, USA; National Academy of Sciences Price $2.50

Recommended Dietary Allowances (RDA) are defined as the levels of intake of essential nutrients considered, in the judgment of the Food and Nutrition Board (of the US National Research Council) on the basis of available scientific knowledge, to be adequate to meet the known nutritional needs of practically all healthy persons. From their original function as a guide for advising 'on nutrition problems in connection with national defence', RDA have come to serve as a guide in many other areas. This 8th edition contains the following sections: General considerations (pp. 1-20), which discusses the scope of RDA and their uses; Water (pp. 21-24); Energy (pp. 25-36), which considers the establishment of RDA for energy and sources of energy; Protein (pp. 37-48); Essential fatty acids and fat-soluble vitamins (pp. 49-62); Water-soluble vitamins (pp. 63-81); and Mineral elements (pp. 82-102). A bibliography (pp. 103-128) and a table of Recommended Daily Dietary Allowances (following p. 128) are included. JA

51

Nutrition & food in an African economy. Vol. 1 & 2. [Book]
Amann, V. F.; Belshaw, D. G. R.; Stanfield, J. P. (Editors)

xiii + 581pp. (1972) [many ref. En] Kampala, Uganda; Makerere Univ. Price: 50sh

Vol. 1 of this book (xiii + 334pp.) contains the following sections: The dimension of the malnutrition problem in Uganda (pp. 1-41); Food requirements and consumption patterns (pp. 42-154); Food production, performance and potentials (pp. 155-241); Nutrition rehabilitation based on hospital and health centre (pp. 242-306); and Nutrition projects: a review of experience (pp. 307-334). Individual chapters of interest to food scientists include: Nutritional content and value of local foodstuffs: a critical appraisal, by H. J. L. Burgess & A. P. Burgess (pp. 45-58, 11 ref.), which includes tables giving composition of various cereals and sugars, starchy roots and fruits, legumes and oil seeds, vegetables, fruits, dairy products, eggs, fats and oils, meat, fish and insects (fresh and dried termites and grasshoppers); and Factors affecting present and future supplies of animal protein, by V. F. Amann (pp. 195-220, 15 ref.), which deals with meat and milk. A subject index is included (pp. 334a-334f). Vol. 2 (pp. 335-581) comprises and extensive bibliography, compiled by J. E. McCrae, B. Brock & A. Sharman, on subjects including analysis of foodstuffs, supplementary foods, institutional feeding, individual foods, storage and processing, distribution and marketing, food patterns, etc. AL

52

Nutritional evaluation of food processing. [Book]
Harris, R. S.; Karmas, E. (Editors)
xiii + 670pp. ISBN 0-87055-189-2 (1975) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co. Inc. Price $36 (USA) $37 (Foreign) [Massachussetts Inst. of Tech., Cambridge, Massachusetts, USA]

This 2nd edition of a detailed book on the effects of cultivation, harvesting, handling and processing on the nutritional value of foods includes the following chapters: General discussion on the stability of nutrients (pp. 1-4); The major food groups and their nutrient content (pp. 5-10, 6 ref.); Nutritional aspects of food processing methods, (pp. 11-15, 3 ref.); Stability of nutrients in foods (pp. 16-18); Genetic manipulation to improve nutritional quality of vegetables (pp. 19-32, 51 ref.); Effects of agricultural practices on foods of plant origin (pp. 33-57, many ref.); Effects of agricultural practices on foods of animal origin (pp. 58-97, many ref.); Effects of harvesting and handling on fruit and vegetables (pp. 98-118, 46 ref.); Effects of handling and storage on seeds (pp. 118-124, 14 ref.); Effects of postmortem handling (pp. 125-138, 27 ref.); Effects of refining operations on cereals (pp. 139-158, 44 ref.); Effects of refining operations on legumes (pp. 158-187, many ref.); Effects of processing on the nutritive value of oilseed meals (pp. 187-204, many ref.); Effects of blanching, pasteurization and sterilization on nutrients (pp. 205-240, many ref.); Effects of baking on nutrients (pp. 240-243, 13 ref.); Effects of freeze-preservation on nutrients (pp. 244-288, many ref.); Effects of moisture removal on nutrients (pp. 289-323, many ref.); Effects of processing by fermentation on nutrients (pp. 324-354, many ref.); Effects of salting, curing and smoking on nutrients of flesh foods (pp. 355-381, many ref.). [Continued in following abstr.] AJDW

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Nutritional evaluation of food processing. [Book]
Harris, R. S.; Karmas, E. (Editors)
xiii + 670pp. ISBN 0-87055-189-2 (1975) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co. Inc. Price $36 (USA) $37 (Foreign) [Massachussetts Inst. of Tech., Cambridge, Massachussetts, USA]

[Continued from preceding abstr.] Effects of high-sugar processing on nutrients (p. 382); Effects of treatment with chemical additives (pp. 383-392, 48 ref.); Effects of treatment of foods with ionizing radiation (pp. 393-411, many ref.); Effects of packaging on nutrients (pp. 412-462, many ref.); Effects of food preparation procedures on nutrient retention, with emphasis on food service practices (pp. 463-528, many ref.); Effects of home food preparation practices on nutrient content of foods (pp. 529-567, many ref.); Addition of amino acids to foods (pp. 569-612, many ref.); Addition of minerals and vitamins to foods (pp. 612-620, 19 ref.); and Factors affecting nutrient metabolism (pp. 621-654, many ref.). A 16-page subject index is included. AJDW

54

Nutrition and dietetic foods. [Book]
Bender, A. E.
xi + 298pp. (1973) [many ref. En] Aylesbury, Bucks., UK; International Textbook Co. Ltd. [Queen Elizabeth Coll., Univ. of London, UK]

This book includes the following chapters: Foods for health (pp. 1-11, 3 ref.); Inborn errors of metabolism (pp. 23-39); Low-sodium (pp. 40-48); Diabetes (pp. 49-59); Infant foods (pp. 60-82); Slimming regimes (pp. 83-96); Protein-rich preparations (pp. 97-109); Foods for the elderly (pp. 110-122, 46 ref.); Atherosclerosis (pp. 123-128); Proteins (pp. 160-180, 7 ref.); Fats (pp. 181-190); Mineral elements (pp. 191-207); Vitamins (pp. 208-257); Food enrichment (pp. 258-264); and Losses of nutrients (pp. 265-274, 3 ref.). Appendices list dietetic foods manufactured in Great Britain, and names and addresses of manufacturers; definitions of foods and drugs; and composition of gluten-free products, Aminex low-protein biscuit, Portagen powder, diabetic chocolate and milk food preparations. A 12pp. index is included. [See FSTA (1969) 1 10G406 for Ed. 1.] AL

55

Protein and nutrition policy in low-income countries. [Book]
Aylward, F.; Jul, M.
xiv + 150pp. ISBN 0-85314-216-5 (1975) [many ref. En] London, UK; Charles Knight & Co. Ltd. [Dep. of Food Sci., Univ. of Reading, Reading, Berks., UK]

This book, based on a report prepared for the Protein Advisory Group of the United Nations, comprehensively surveys protein and nutrition policy in low-income countries. It covers nutritional background; protein needs; protein supplies and consumption; agricultural and other sources of protein; protein foods (including food preservation and processing, protein concentrates from agricultural products, oilseeds and other sources, and uses of these concentrates in industrialized countries); protein foods in low-income countries (including sources, nutritional fortification, safety guidelines, acceptability, distribution and marketing, and preparations now in use); national food and nutrition policies; actions within low-income countries (including the need for post-harvest management of food supplies through improved storage, preservation, processing and distribution); and the contribution of industrialized countries (mobilization of scientific and technical resources), United Nations agencies, foundations, and other intenational and voluntary organizations. AL

56

Physicians' handbook of nutritional science. [Book]
Williams, R. J.
xiii + 114pp. ISBN 0-398-03256-4 (1975) [many ref. En] Springfield, Illinois, USA; Charles C. Thomas Price $9.75 [Univ. of Texas, Austin, Texas, USA]

This book, Publication No. 963 in the American Lecture Series, contains the following chapters: The environmental problem (pp. 3-6); How we are able to get the nutrients we need (pp. 7-11); Major historical bouts with the food environment (pp. 12-19, 10 ref.); What are the basic principles which underlie nutritional science? (pp. 20-25); Internal nutrition (pp. 26-31, 10 ref.); Prenatal nutrition (pp. 32-38, 6 ref.); Biochemical individuality (pp. 39-52, 27 ref.); The range of potential benefits to be derived from the improvement of nutritional environments: a new concept in pathology: generalized cytopathy (pp. 53-69, 37 ref.); The role of nutritional supplements (pp. 70-82, 7 ref.); The contamination or pollution of nutritional environments (pp. 83-90, 7 ref.); and What is not known about clinical nutrition (pp. 81-107, 25 ref.). A 6pp. index is included. AL

57

Nutrition. Vol. 3. Foods for the expanding world. Proceedings of the Ninth International Congress of Nutrition, Mexico, September 3-9, 1972.
[Conference proceedings]
Chavez, A.; Bourges, H.; Basta, S. (Editors)
xv + 368pp. ISBN 3-8055-1677-0 (1975) [many ref. En] Basle, Switzerland; S. Karger AG

This 3rd volume in a 4 volume collection of papers read at the conference includes the following: Population, food and nutrition, by W. H. Pawley & M. Ganzin (pp. 1-9); Recent trends in world food availability and their implications, by P. V. Sukhatme (pp. 10-19, 14 ref.); Food production and supply in Latin America, by F. Recalde (pp. 20-26, 7 ref.); Problems and prospects of raising food production in Africa, by M. Ganzin & J. Perisse (pp. 27-37, 3 ref.); Nutrition and the green revolution: the Morinda [Punjab, India] experience, by F. J. Levinson (pp. 38-43, 9 ref.); Genetic improvement of the nutritional quality of cereal protein, by E. Villegas (pp. 44-52, 26 ref.); Efforts to increase yields and nutritional quality in the food legumes, by L. M. Roberts (pp. 53-60); Maximization of animal protein production from world resources, by T. R. Preston (pp. 61-68, 14 ref.); Recent developments in the production and utilisation of leaf protein concentrate, by A. A. Woodham (pp. 69-75, 27 ref.); Alkane-grown yeasts: a new source of protein, by C. A. Shacklady (pp. 76-84, 13 ref.); Spirulina algae: food for tomorrow, by H. Durand-Chastel & G. Clement (pp. 85-90, 5 ref.); Continuous protein hydrolysis by enzymes: some principles of ultrafiltration reactor design, by G. Viniegra-Gonzalez (pp. 91-96, 6 ref.); Protein Advisory Group (PAG) of the United Nations System: recent activities, by P. S. Venkatachalam (pp. 102-106); [continued in following abstr.]. JA

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Nutrition. Vol. 3. Foods for the expanding world. Proceedings of the Ninth International Congress of Nutrition, Mexico, September 3-9, 1972.
[Conference proceedings]
Chavez, A.; Bourges, H.; Basta, S. (Editors)
xv + 368pp. ISBN 3-8055-1677-0 (1975) [many ref. En] Basle, Switzerland; S. Karger AG

[Continued from preceding abstr.] Research on controlling level and type of fat in animal foods, by S. R. Hoover (pp. 128-135, 18 ref.); Socio-economic background to food processing in developing countries, by F. T. Sai (pp. 225-230); Protein enriched foods: facts and illusions, by J. Mauron (pp. 231-245, 12 ref.); Adapting food processing for internal markets in developing countries, by D. A. V. Dendy (pp. 246-252); Production of salted fish loaves in a pilot plant and their acceptance among indigenous groups, by F. R. del Valle (pp. 253-264, 3 ref.); Enrichment of bread using protein-enriched food pellets, by A. Bacigalupo & Z. Reynoso (pp. 265-277, 10 ref.); Extent of potentially toxic substances in food, by B. J. Wilson (pp. 278-283, 8 ref.); Pesticide residues and their significance, by A. E. Olszyna-Marzys (pp. 283-288, 14 ref.); Implication of mycotoxins for human health, by T. C. Campbell & L. Stoloff (pp. 289-302, 60 ref.) [see FSTA (1975) 7 6C186]; and Environment pollution of foodstuffs with

carcinogenic hydrocarbons, by R. Engst & W. Fritz (pp. 303-309, 27 ref.) [see FSTA (1975) 7 8C271]. JA

59

[Principles of nutrition and food technology.] Zasady zywienia i technologia potraw. [Book]
Wysokinska, Z.; Jurkiewicz, M.
243pp. (1975) [Pl] Warsaw, Poland; Wydawnictwa Naukowo-techniczne Price 27zl

The book consists of 2 parts (biochemistry of human nutrition and food technology) and is intended for students of food technology. It includes the following chapters: A: General metabolism and energy consumption (pp. 11-17); Energy components of nutrition (pp. 18-33); Mineral components and water requirements (pp. 34-53); Vitamins (pp. 54-75); Digestion and organic transformations (pp. 76-81); Nutritional value of food products (pp. 82-108); Nutritional norms (pp. 109-121); Basic principles of planning and evaluation of menus (pp. 122-125); Food poisoning (pp. 126-130); B: Basic principles of food technology (pp. 131-134); Changes of basic nutrients during technological processes (pp. 135-143); Preparation of foods from fruit and vegetables (pp. 144-161); Preparation of foods from meat, poultry and fish (pp. 162-189); Preparation of foods and beverages from milk (pp. 190-195); Preparation of foods from eggs (pp. 196-202); Preparation of foods from flour and groats (pp. 203-215); Preparation of soups and sauces (pp. 216-225); Preparation of desserts and beverages (pp. 226-235); and Baking of doughs (pp. 236-243). STI

60

Vitamin C. Recent aspects of its physiological and technological importance. [Book]
Birch, G. G.; Parker, K. J. (Editors)
xx + 259pp. ISBN 0-85334-606-2 (1974) [many ref. En] Barking, Essex, UK; Applied Science Publishers Ltd. Price £10

Papers presented at this industry-university co-operation symposium organized under the auspices of the National College of Food Technology, University of Reading, on 2-3 April, 1974, include: Vitamin C: historical aspects, by I. M. Sharman (pp. 1-15, 40 ref.); Technical uses of vitamin C, by H. Kläui (pp. 16-30, 20 ref.); The chemical estimation of vitamin C, by J. R. Cooke (pp. 31-39, 21 ref.); Quality changes related to vitamin C in fruit juice and vegetable processing, by G. G. Birch, B. M. Bointon, E. J. Rolfe & J. D. Selman (pp. 40-67, 23 ref.); Nutritional interactions between vitamin C and heavy metals, by R. E. Hughes (pp. 68-77, 52 ref.); Vitamin C and nitrosamine formation, by C. L. Walters (pp. 78-90, 32 ref.); Recent advances in vitamin C metabolism, by D. Hornig (pp. 91-103, 13 ref.); Vitamin C in canning and freezing, by J. D. Henshall (pp. 104-120, 37 ref.); The significance of ascorbates and erythorbates in meat products, by M. D. Ranken (pp. 121-135, 46 ref.); Vitamin C in soft drinks and fruit juices, by D. M. Gresswell (pp. 136-149, 24 ref.); Vitamin C in breadmaking, by B. H. Thewlis (pp. 150-160, 11 ref.); Role of vitamin C on microsomal cytochromes, by E. Degkwitz & H. Staudinger (pp. 161-178, 27 ref.); Vitamin C in lipid metabolism and atherosclerosis, by E. Ginter (pp. 179-202, 87 ref.); Vitamin C: tissue metabolism, over-saturation, desaturation and compensation, by C. W. M. Wilson (pp. 203-220, 88 ref.); and Recent advances in the molecular biology of vitamin C, by S. Lewin (pp. 221-252, 91 ref.). VJG

61

Nutritional improvement of food legumes by breeding. [Conference proceedings]
Milner, M. (United Nations, Protein Advisory Group) (Editor)
xvi + 399pp. ISBN 0-471-70112-2 (1975) [many ref. En] New York, USA; John Wiley & Sons Price $26.60; £13.30

This book is based on a symposium sponsored by the Protein Advisory Group (PAG) of the United Nations, held at FAO, Rome, Italy on 3-5 July, 1972, and on PAG Statement 22: Upgrading human nutrition through the improvement of food legumes. It provides an in-depth analysis of what must be done to increase the production and improve the deficiencies of food legumes by genetic means. The book is divided into 5 sections: Nutritional importance of legumes for humans (pp. 13-58); Status and potential for genetic improvement of food legumes (pp. 59-176); Nutritionally related factors in legumes requiring genetic improvement (pp. 177-309); Analytical and mass screening techniques (chemical, biochemical, toxicological, nutritional) (pp. 311-345); and A call for action: upgrading human nutrition through the improvement of food legumes (pp. 347-389). An earlier paperback version of this book was published by PAG for distribution in developing countries [FSTA (1975) 7 1J165-167]. This hardback version contains an additional paper: A new assessment of needed research, by R. Bressani (pp. 381-389, 5 ref.). JA

62

Success in nutrition. [Book]
Pyke, M.
x + 227pp. ISBN 0-7195-3198-5 (Paperback) ISBN 0-7195-3186-1 (Hardback) (1975) [15 ref. En] London, UK; John Murray (Publishers) Ltd. Price £3.00 (Hardback) £1.95 (Paperback)

This book is a self-contained course in basic nutritional science and covers syllabus material for a large number of examinations. Chapter headings are: The science of nutrition; Digestion and absorption; Carbohydrate; Fat; Proteins and amino acids; Metabolism, work and energy; Energy requirements and energy intake; Appetite and obesity; Mineral substances and nutrients; Calcium and phosphorus; Iron and anaemia; Iodine and fluorine; Vitamin A (retinol); Vitamin D

(cholecalciferol); Vitamin E and Vitamin K; The B-group vitamins; Vitamin C (ascorbic acid); Foodstuffs and nutrition; Calculating the nutritional adequacy of diets; Some socio-economic aspects of nutrition; Nutrition and food hygiene; and Prevention of dietary infection. The appendix includes a table of food composition and a glossary. AL

63

Introduction to nutrition. [Book]
Fleck, H.
Ed. 3, viii + 552pp. ISBN 0-02-338430-1 (1976) [En] New York, USA; Macmillan Publishing Co., Inc. Price £6.50 [Home Economics & Nutr. Dep., New York Univ., New York, USA]

The book is intended for college students and contains the following chapters: The meanings of food (pp. 1-10, 12 ref.); Nutrition - yesterday and today (pp. 11-30, 17 ref.); Food habits (pp. 31-42, 14 ref.); The nutrients (pp. 43-55, 8 ref.); Carbohydrates (pp. 56-61, 6 ref.); Fats and other lipids (pp. 62-70, 11 ref.); Protein and amino acids (pp. 71-85, 12 ref.); The release and utilization of nutrients (pp. 86-98, 6 ref.); Energy metabolism (pp. 99-114, 7 ref.); Nutrition and weight (pp. 115-133, 25 ref.); An overview of vitamins (pp. 134-143, 7 ref.); The fat-soluble vitamins (pp. 144-162, 26 ref.); The B vitamins - water soluble (pp. 163-191, 38 ref.); Ascorbic acid (pp. 192-200, 12 ref.); An overview of minerals (pp. 201-206, 7 ref.); Major minerals (pp. 207-219, 16 ref.); Trace elements (pp. 220-239, 39 ref.); Water and nutrition (pp. 240-245, 9 ref.); Nutrition and dental health (pp. 246-255, 12 ref.); Geography, culture, and nutrition (pp. 256-269, 9 ref.); Nutrition for infants (pp. 270-288, 16 ref.); Nutrition for children (pp. 289-313, 13 ref.); Public and private feeding and nutrition programs (pp. 314-331, 21 ref.); Nutrition for adolescence and youth (pp. 332-344, 8 ref.); Nutrition for adults (pp. 345-355, 7 ref.); Nutrition for older Americans (pp. 356-371, 20 ref.); Nutrition in pregnancy and lactation (pp. 372-384, 21 ref.) Contributions of foods (pp. 385-412, 7 ref.); Planning the daily diet according to lifestyle (pp. 413-429, 15 ref.); [Continued in following abstr.] AL

64

Introduction to nutrition. [Book]
Anon.
Ed. 3, viii + 552pp. ISBN 0-02-338430-1 (1976) [En] New York, USA; Macmillan Publishing Co., Inc., Price £6.50 [Home Economics & Nutr. Dep., New York Univ., New York, USA]

[Continued from preceding abstr.] Buying food for good nutrition (pp. 430-453, 18 ref.); Snacks (pp. 454-463, 7 ref.); Modifications of the diet (pp. 464-471, 6 ref.); Food fads, foodlore, and fallacies (pp. 472-484, 21 ref.); and Looking ahead (pp. 485-497, 20 ref.). The appendices include a glossary (pp. 501-508); tabulations of the nutritive value of foods (pp. 509-534); sources for nutrition information in the USA (pp. 535-536); and recommended daily nutrient intakes in Canada (pp. 537-539). The book is illustrated and has a 12pp. index. AL

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[Nutrition of invalids. A manual for doctors and dieticians.] Krankenernährung. Ein Leitfaden für Ärzte und Diätassistentinnen. [Book]
Welsch, A.
ix + 513pp. ISBN 3-13-419303-5 (1975) [De] Stuttgart, Federal Republic of Germany; Georg Thieme Verlag Price DM26.80

This third revised and expanded edition of this manual of nutrition and dietetics for invalids gives recommended diets for patients suffering from a wide range of diseases, and includes extensive data for nutrient concn. in numerous foods. A 16-page bibliography and a 15-page subject index are included. AJDW

66

Protein-calorie malnutrition. [Book]
Olson, R. E. (Editor)
xxiv + 467pp. ISBN 0-12-526150-0 (1975) [many ref. En] New York, USA; Academic Press Inc. Price $29.50 [Dep. of Biochem., St. Louis Univ. School of Med., St. Louis, Missouri, USA]

This book, a volume in the Nutrition Foundation Monograph series, is based on a symposium held in Chiang Mai, Thailand, on Jan. 8-11, 1973 and covers all aspects of protein-calorie malnutrition (PCM) from molecular biology to epidemiology and prevention. It contains the following papers: Amino acid requirements and age, by G. Arroyave (pp. 1-18, 18 ref.); Adaptation to low-protein intakes, by J. C. Waterlow (pp. 23-35, 36 ref.); Protein turnover in various nutritional states, by D. M. Hegsted (pp. 37-44, 7 ref.); Lysine metabolism in PCM with attention to the synthesis of carnitine, by H. P. Broquist, D. W. Horne & V. Tanphaichitr (pp. 49-60, 18 ref.); Cellular energy metabolism in PCM, by J. Metcoff (pp. 65-85, 23 ref.); Brain DNA synthesis in PCM, by M. Winick & P. Rosso (pp. 93-102, 17 ref.); Electroencephalograms, learning, and malnutrition, by D. Karyadi (pp. 103-105, 11 ref.); The relationship of severe marasmic protein-energy malnutrition and rehabilitation in infancy to subsequent mental development, by D. S. McLaren, U. S. Yaktin, A. A. Kanawati, S. Sabbagh & Z. Kadi (pp. 107-112, 8 ref.); Carbohydrate and lipid metabolism in PCM, by A. S. Truswell (pp. 119-141, 115 ref.); Water-soluble vitamins in PCM, by O. Thanangkul (pp. 149-161, 42 ref.); [continued in following abstr.] JA

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Protein-calorie malnutrition. [Book]
Olson, R. E. (Editor)
xxiv + 467pp. ISBN 0-12-526150-0 (1975) [many ref. En] New York, USA; Academic Press Inc. Price $29.50 [Dep. of Biochem., St. Louis Univ. School of Med., St. Louis, Missouri, USA]

[Continued from preceding abstr.] Nutritional survey of children in the Dominican Republic with attention to deficits in water-soluble vitamins, by W. H. Sebrell, Jr. (pp. 163-171, 14 ref.); The fat-soluble vitamins and PCM, by D. S. Mc Laren (pp. 181-194, 53 ref.); Mineral metabolism in PCM, by G. A. O. Alleyne (pp. 201-212, 34 ref.); Mineral metabolism in protein malnutrition, by H. H. Sandstead (pp. 213-220, 28 ref.); Endocrines and malnutrition, by J. D. L. Hansen (pp. 229-241, 33 ref.); Erythropoiesis in PCM, by C. A. Finch (pp. 247-256, 33 ref.); The anemia of PCM, by R. W. Vilter (pp. 257-261, 18 ref.); The effect of vitamin E on the anemia pf PCM in northern Thai children, by P. Kulapongs (pp. 263-268, 7 ref.); The effect of variations in protein and calorie intake on the rate of recovery and selected physiological responses in Thai children with PCM, by R. E. Olson (pp. 275-297, 40 ref.); The liver in PCM: an ultrastructural study, by N. Bhamarapravati (pp. 299-307, 5 ref.); Calories in the treatment of PCM, by P. György (pp. 311-316, 22 ref.); Protein-sparing effect of excess calories during adaptation to low-protein intake, by G. Inoue (pp. 317-324, 12 ref.); [continued in following abstr.] JA

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Protein-calorie malnutrition. [Book]
Olson, R. E. (Editor)
xxiv + 467pp. ISBN 0-12-526150-0 (1975) [many ref. En] New York, USA; Academic Press Inc. Price $29.50 [Dep. of Biochem., St. Louis Univ. School of Med., St. Louis, Missouri, USA]

[Continued from preceding abstr.] Protein versus calories in the treatment of PCM: metabolic and population studies in India, by C. Gopalan (pp. 329-341, 4 ref.); Interactions of malnutrition and infection: advances in understanding, by N. S. Scrimshaw (pp. 353-367, 64 ref.); Immunoglobulins and complement in PCM, by S. Sirisinha (pp. 369-375, 12 ref.); Cell-mediated immunity in PCM, by R. Edelman (pp. 377-381, 11 ref.); Treatment of severe PCM, by A. E. Ifekwunigwe (pp. 389-401, 61 ref.); The in-patient and out-patient treatment of the child with severe PCM, by R. Suskind (pp. 403-410, 12 ref.); Prevention of vitamin and mineral deficiencies associated with PCM, by J. L. Smith, J. L. Sulzer & G. A. Goldsmith (pp. 415-429, 1 ref.); and Prevention of PCM, by J. M. Bengoa (pp. 435-452, 36 ref.). Discussions of the papers are included. JA

69

The value of food. [Book]
fisher, P.; Bender, A. E.
Ed. 2, viii + 184pp. ISBN 0-19-859457-7 (1975) [many ref. En] Oxford, UK; Oxford University Press £1.95

This book is a comprehensive text on the nutritional aspects of food and the practical applications of nutrition. It is particularly suitable for students of home economics, social science, food technology and hotel and institutional management, and useful for catering personnel in industry, hospitals and schools. In this second edition, the authors have revised and up-dated the text to take account of nomenclature for vitamins and new units of wt. and measurements. The chapter on manufactured foods outlines the various methods of food preservation, the use of processing aids, the labelling of foods, the nutritional losses during processing of foods, the pasteurization of milk, the stability of vitamins, and food standards, definitions and regulations for UK. GL

70

Human nutrition and dietetics. [Book]
Davidson, Sir S.; Passmore, R.; Brock, J. F.; Truswell, A. S.
Ed. 6, viii + 756pp. ISBN 0-443-01310-1 (1975) [many ref. En] Edinburgh, UK; Churchill Livingstone Price £9

This book is divided into 6 sections: Physiology (pp. 3-183); Food (pp. 191-278), giving a general description of the foods most commonly eaten by man including their chemical properties, nutritive properties, the effects of processing (milling, preserving, cooking) and a short account of various forms of food poisoning; Primary nutritional diseases (pp. 281-362); Conditioned nutritional diseases (pp. 365-545); Public health (pp. 547-631); and Diet and physiological stress (pp. 635-668). A glossary of food terms constitutes 1 of 4 appendices. In this sixt edition, the index and all chapters have been revised, 3 new chapters and various new sections have been included and some sections have been rewritten. GL

71

[Complex product formulations and production of dietetic foods from poultry meat.] Komplexna vyrobkova koncepcia liecebnej vyzivy z hydinovych mias. [Book]
Bobis, L.
194pp. (1975) [Sk] Bratislava, Czechoslovakia; VU hydinarskeho priemyslu

This book is intended for dieticians and for those branches of the food industry concerned with production of low calorie and special dietetic foods. It includes the following chapters: Dietetic nutrition (including general considerations from a medical standpoint; poultry meat in dietetic nutrition and quality requirements) (pp. 3-21); Development of poultry processing industry (including developments in technology and distribution) (pp. 22-39); Dietetic foods and their product formulations (including low calorie, antisclerotic, low fat, milk, protein reduced, diabetic, low Na, high calorie and other specialized diets) (pp. 40-187); and Optimization of product concepts using computers (pp. 188-191). STI

PROTEIN FOODS

72

Single cell protein II. [Book]
Tannenbaum, S. R.; Wang, D. I. C. (Editors)
ix + 707pp. ISBN 0-262-20030-9 (1975) [many ref. En] Cambridge, Massachusetts, USA; MIT Press Price £11.00

Papers presented at the 1973 international conference on single-cell protein (SCP) include: Product outlook and technical feasibility of SCP, by A. E. Humphrey (pp. 1-23, 13 ref.); SCP for human consumption - an overview, by N. S. Scrimshaw (pp. 24-45, 17 ref.); Fermentor design, by R. T. Hatch (pp. 46-68, 21 ref.); Cell collection: recovery and drying for SCP manufacture, by T. P. Labuza (pp. 69-104, 56 ref.); SCP in submerged cultures, by L. K. Nyiri & R. P. Jefferis, III (pp. 105-126, 32 ref.); Insoluble substrate and oxygen transport in hydrocarbon fermentation, by A. Prokop & M. Sobotka (pp. 127-157, 98 ref.); Removal of nucleic acids in SCP, by A. J. Sinskey & S. R. Tannenbaum (pp. 158-178, 14 ref.); Protein extraction and recovery from microbial cells, by P. Dunnill & M. D. Lilly (pp. 179-207, 17 ref.); Production of SCP in Israel, by R. I. Mateles (pp. 208-222, 10 ref.); Production of fungal protein from carob (Ceratonia siliqua L.), by F. K. E. Imrie & A. J. Vlitos (pp. 223-243, 22 ref.). [Continued in following abstr.] VJG

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Single cell protein II. [Book]
Tannenbaum, S. R.; Wang, D. I. C. (Editors)
ix + 707pp. ISBN 0-262-20030-9 (1975) [many ref. En] Cambridge, Massachusetts, USA; MIT Press Price £11.00

[Continued from preceding abstr.] Production of SCP from insoluble agricultural wastes by mesophiles, by C. E. Dunlap (pp. 244-262, 29 ref.) Conversion of insoluble agricultural wastes to SCP by thermophilic microorganisms, by W. D. Bellamy (pp. 263-272, 18 ref.); Utilization of cane and coffee processing by-products as microbial protein substrates, by C. Rolz (pp. 273-313, 59 ref.); The growth of microfungi on carbohydrates, by C. Anderson, J. Longton, C. Maddix, G. W. Scammel & G. L. Solomons (pp. 314-329, 16 ref.); Economic analysis of ultrafiltration - fermentation plants producing whey protein and SCP from cheese whey, by G. W. Pace & D. J. Goldstein (pp. 330-343, 11 ref.); The pekilo process: protein from spent sulfite liquor, by H. Romantschuk (pp. 344-356, 1 ref.); SCP production from methane, by G. Hamer, D. E. F. Harrison, J. H. Harwood & H. H. Topiwala (pp. 357-369, 9 ref.); SCP production from methanol: bacteria, by J. S. Gow, J. D. Littlehailes, S. R. L. Smith & R. B. Walter (pp. 370 384); Studies of biomass production of methanol oxidizing bacteria, by M. Dostalek & N. Molin (pp. 385-401, 1 ref.). [Continued in following abstr.] VJG

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Single cell protein II. [Book]
Tannenbaum, S. R.; Wang, D. I. C. (Editors)
ix + 707pp. ISBN 0-262-20030-9 (1975) [many ref. En] Cambridge, Massachusetts, USA; MIT Press Price £11.00

[Continued from preceding abstr.] SCP production from methanol by yeast, by C. L. Cooney & D. W. Levine (pp. 402-423, 26 ref.); Gas-oil as a substrate for SCP production, by B. M. Laine & J. du Chaffaut (pp. 424-437, 12 ref.); The production of yeast from n-paraffins, by M. Kanazawa (pp. 438-453, 2 ref.); Semi-commercial studies of a petroprotein process based on n-paraffins, by P. G. Cooper, R. S. Silver & J. P. Boyle (pp. 454-466, 4 ref.); Producing Spirulina with CO_2, by G. Clement (pp. 467-474, 7 ref.); Some results of SCP medico-biological investigations, by A. Pokrovsky (pp. 475-483); Guidelines for the evaluation of SCP for human consumption, by B. L. Oser (pp. 484-488); Effect of processing on the nutritive value of Saccharomyces cerevisiae, Scenedesmus obliquus, and Spirulina platensis measured by protein synthesis in vitro in rat skeletal muscle, by P. Omstedt, A. von der Decken, G. Hedenskog & H. Mogren (pp. 553-563, 16 ref.); Clinical studies on the nutritional value of SCP, by V. R. Young & N. S. Scrimshaw (pp. 564-586, 37 ref.); Utilization of SCP for human food, by C. K. Rha (pp. 587-602, 12 ref.). [Continued in following abstr.] VJG

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Single cell protein II. [Book]
Tannenbaum, S. R.; Wang, D. I. C. (Editors)
ix + 707pp. ISBN 0-262-20030-9 (1975) [many ref. En] Cambridge, Massachusetts, USA; MIT Press Price £11.00

[Continued from preceding abstr.] Marketing SCP in sophisticated markets, by T. M. Hammonds (pp. 603-611, 1 ref.); Marketing SCP in low-income countries: a double perspective, by F. J. Levinson & J. E. Austin (pp. 612-620); and Role of the international agencies, by M. Milner (pp. 621-626). An appendix 'Guidelines and statements of the Protein Advisory Group of the United Nations System' includes: PAG guideline No. 6 - preclinical testing of novel sources of protein (pp. 627-654, 30 ref.); PAG guideline No. 7 - human testing of supplementary food mixture (pp. 655-669, 11 ref.); and PAG guideline No. 12 - production of SCP for human consumption (pp. 670-673, 5 ref.). A book was published in 1968, based on papers presented at the first international meeting in 1967 at the Massachusetts Institute of Technology [See FSTA (1971) 3 12G458, 12G459 and 12G460]. VJG

76

Production of single cell protein by cultivation of yeasts on fats and fat products. [Book]
Veen, J. van der
143pp. (1974) [many ref. En, nl, ru] Zeist, Netherlands; Centraal Inst. voor

Voedingsonderzoek

This book describes the utilization of fats, fatty acids and fat products for the cultivation of yeast biomass. An introductory chapter deals with the world protein shortage, general aspects of single cell protein production, specific problems of fat fermentation, and availability of fats and fat products. Other chapters include: various analytical methods (fat, yeast, sanitary analysis of yeast, nutritional testing and safety evaluation of yeast); Standard procedure for fat fermentation (fermentation steps, selection of yeast strain, composition of media, etc.); Application of standard procedure (various fat sources, batch or continuous fermentation); and Properties of produced yeast. AL

77

Food protein sources. [Book]
Pirie, N. W. (Editor)
xx + 260pp. ISBN 0-521-20588-3 (1975) [many ref. En] Cambridge, UK; Cambridge University Press Price £7.50 [Rothamsted Exp. Sta., Harpenden, Hertfordshire, UK]

This book, No. 4 in the International Biological Programme series, is divided into 4 sections: Sources edible after minimal processing (pp. 1-39); Concentrates made by mechanical extraction (pp. 41-143); Concentrates made by biological conversion (pp. 145-230); and The use of novel foods (pp. 231-252), each section containing several chapters. Chapters are: Protein-rich cereal seeds, by A. K. Kaul (pp. 1-8, 19 ref.); Varietal improvement of seed legumes in India, by L. M. Jeswani (pp. 9-18, 2 ref.); Minor food seeds, by D. A. V. Dendy, B. Emmett & O. L. Oke (pp. 19-26, 19 ref.); Vegetables, by F. W. Shepherd (pp. 27-32, 4 ref.); The Spirulina algae, by N. W. Pirie (pp. 33-34); Green micro-algae, by H. Tamiya (pp. 35-39, 21 ref.); Protein products from coconuts, by D. A. V. Dendy (pp. 43-46, 12 ref.); Soybeans: processing and products, by S. J. Circle & A. K. Smith (pp. 47-64, 88 ref.); Rapeseed and other crucifers, by R. Ohlson & R. Sepp (pp. 65-78, 28 ref.); Sunflower, safflower, sesame and castor protein, by A. A. Betschart, C. K. Lyon & G. O. Kohler (pp. 79-104, 106 ref.); Groundnut, by O. L. Oke, R. H. Smith & A. A. Woodham (pp. 105-116, 42 ref.); Broad bean, by A. Hagberg & J. Sjödin (pp. 117-119, 14 ref.); [Continued in following abstr.]. JA

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Food protein sources. [Book]
Pirie, N. W. (Editor)
xx + 260pp. ISBN 0-521-20588-3 (1975) [many ref. En] Cambridge, UK; Cambridge University Press Price £7.50 [Rothamsted Exp. Sta., Harpenden, Hertfordshire, UK]

[Continued from preceding abstr.] Concentrates by wet and dry processing of cereals, by R. M. Saunders & G. O. Kohler (pp. 121-131, 25 ref.); Leaf protein, by N. W. Pirie (pp. 133-139, 18 ref.); Industrial production of leaf protein in the USA, by G. O. Kohler & E. M. Bickoff (pp. 141-143, 6 ref.) Protein from non-domesticated herbivores, by K. L Blaxter (pp. 147-156, 43 ref.); The use of non-protein nitrogen by ruminants, by T. R. Preston (pp. 157-163, 19 ref.); Non-protein nitrogen in pig nutrition, by R. Braude (pp. 165-168, 33 ref.); The domestic non-ruminant animal as consumer and provider of protein, by A. A. Woodham (pp. 169-178, 32 ref.); The conversion of animal products such as wool and feathers into food, by F. B. Shorland (pp. 179-186, 44 ref.); Increasing the direct consumption of fish, by G. H. O. Burgess (pp. 187-200, 25 ref.); Fungi, by W. E. Trevelyan (pp. 201-213, 52 ref.); Yeasts grown on hydrocarbons, by C. A. Shacklady (pp. 215-222, 18 ref.); Variation in the composition of bacteria and yeast and its significance to single-cell protein production, by C. L. Cooney & S. R. Tannenbaum (pp. 223-230, 14 ref.); Quality standards, safety and legislation, by F. Aylward (pp. 233-244, 3 ref.); and Acceptance of novel foods by the consumer, by R. P. Devadas (pp. 245-252, 21 ref.). JA

CATERING

79

Quality control in food service. [Book]
Thorner, M. E.; Manning, P. B.
vii + 368pp. ISBN 0-87055-195-7 (1976) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co. Inc. Price $25.00 (USA) $26.00 (Foreign)

This book is intended to serve as an on-the-job training manual, as a textbook and as a guide for all categories of food service personnel. Chapters are: Scope of quality control in food service (pp. 1-10); Implementation of a quality control programme (pp. 11-37); Purchasing and specifications (pp. 38-60); Receiving and inspection control (pp. 61-80); Storage and issuing control (pp. 81-99); Preparation and production equipment (pp. 100-137); Pre-cooking quality control (pp. 138-150); Cooking quality control (pp. 151-161); Post-cooking quality control (pp. 162-172); Desserts and baked products control (pp. 173-181); Non-alcoholic beverages control (pp. 182-239); Food spoilage and sanitation control (pp. 240-275); Water quality and warewashing control (pp. 276-298); Quality control of vending equipment (pp. 299-318); and Energy control and conservation (pp. 319-330). Also included are: a glossary of relevant terms (pp. 331-336); an appendix, containing USDA standards for prepared meat and poultry products and useful tables (pp. 337-356); and a bibliography (pp. 357-360). JA

CHEMISTRY

80

[Chemical modification of pectinous substances.] Khimicheskaya modifikatsiya pektinovykh veshchestv. [Book]
Aimukhamedova, G. B.; Ashubaeva, Z. D.; Umaraliev, Z. A.
82pp. (1974) [104 ref. Ru] Frunze, USSR; Ilim. Price 0.33r

New methods of chemical modification of properties of pectins and purified sugar beet slices are presented. The book includes the following chapters: Effect of periodic acid on pectinous substances (pp. 5-14); derivatives based on dialdehyde-pectic acid (pp. 14-26); synthesis of tricarboxy-pectic acid and its properties (pp. 26-56); the action of oxidants (HIO_4, $NaCLO_2$, Br_2, NO_2) on the cellulose-protopectin complex of cossettes and the properties of oxidation products (pp. 56-62); interaction of dialdehyde-carboxyderivatives with N containing compounds (pp. 62-71); and IR spectroscopy of pectins and some of their derivatives. STI

81

Basic food chemistry. [Book]
Lee, F. A.
ix + 430pp. ISBN 0-87055-188-4 (1975) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co. Inc. Price $24 (USA) $25 (Foreign) [Cornell Univ., Geneva, New York, USA]

This textbook, intended for undergraduates and for use in food laboratories, includes the following chapters: Photosynthesis (pp. 1-8, 14 ref.); Carbohydrates (pp. 9-43, many ref.); Proteins (pp. 44-71, many ref.); Enzymes (pp. 72-86, 31 ref.); Lipids (pp. 87-114, 56 ref.); The vitamins (pp. 115-139, many ref.); Flavour (pp. 140-160, 39 ref.); Natural colours (pp. 161-172, 59 ref.); Browning reactions (pp. 173-195, many ref.); Food colouring (pp. 196-210, 8 ref.); Fermentation and alcoholic beverages (pp. 211-229, 41 ref.); Baked products (pp. 230-248, many ref.); Milk and milk products (pp. 249-281, many ref.); Coffee (pp. 282-303, many ref.); Tea (pp. 304-327, many ref.); Cocoa and chocolate (pp. 328-349, 50 ref.); Meat and meat products (pp. 350-392, many ref.); and fruits and vegetables (pp. 393-417, many ref.). A 13-page subject index is included. AJDW

82

Trace element metabolism in animals - 2. [Conference proceedings]
Hoekstra, W. G.; Suttie, J. W.; Ganther, H. E.; Mertz, W. (**United States of America**, Steenbock Symposium Fund; **United States of America**, University of Wisconsin, Department of Biochemistry; **United States of America**, Department of Agriculture) (Editors)
xxvi + 775pp. ISBN 0-8391-0696-3 (1974) [many ref. En] Baltimore, Maryland, USA; University Park Press Price $39.50

Papers of food interest (giving data for carcass or milk composition) include the following: Trace-element interactions: effects of dietary composition on the development of imbalance and toxicity, by C. F. Mills (pp. 79-89, 33 ref.); Interaction of selenium with mercury, cadmium, and other toxic metals, by J. Parizek, J. Kalouskova, A. Babicky, J. Benes & L. Pavlik (pp. 119-131, 42 ref.); Tracing and treating mineral disorders in cattle under field conditions, by J. Hartmans (pp. 261-273, 17 ref.); The selenium-deficiency problem in animal agriculture, by D. E. Ullrey (pp. 275-293, 46 ref.); Essentiality and function of nickel, by F. H. Nielsen (pp. 381-395, 45 ref.); Excretion of cadmium and lead into milk, by G. P. Lynch, D. G. Cornell & D. F. Smith (pp. 470-472); Selenium metabolism in pigs, by J. Leibetseder, A. Kment & M. Skalicky (pp. 581-583); Absorption and distribution of the ^{59}Fe from Fe-tartrate by baby pigs, by B. Groppel, M. Anke, G. Dittrich, M. Grün & A. Hennig (pp. 664-667); Low nickel rations for growth and reproduction in pigs, by M. Anke, M. Grün, G. Dittrich, B. Groppel & A. Hennig (pp. 715-718); and Secondary copper deficiency in ruminants, by A. Hennig, M. Anke, B. Groppel & H. Lüdke (pp. 726-729). A further 3 papers are abstracted separately in FSTA, and appear in the author index under **United States of America**, Steenbock Symposium Fund [Metabolism Symposium]. AJDW

83

Amino-acids, peptides and proteins. Volume 7. [Book]
Sheppard, R. C. (Editor)
xvi + 431pp. ISBN 0-85186-064-8 (1974) [many ref. En] London, UK; The Chemical ociety

This specialist periodical report reviews papers relevant to the chemistry of amino acids, peptides and proteins published in the main journals during 1974. Chapters are: Amino acids, by G. C. Barrett (pp. 1-30, 331 ref.); Structural investigations of peptides and proteins (covering Primary structure and chemical modification, by J. Bridgen, I. D. Walker & J. E. Walker (pp. 31-147, 1087 ref.); X-ray studies, by H. Muirhead (pp. 148-176, 95 ref.); and Conformation and interaction of peptides and proteins in solution, edited by R. H. Pain (pp. 176-246, 620 ref.)); Peptide synthesis, by D. J. Schafer (pp. 247-319, 466 ref.); Peptides with structural features not typical of proteins, by B. W. Bycroft (pp. 320-351, 206 ref.); Chemical structure and biological activity of enzymes, by A. R. Fersht (pp. 352-380, 185 ref.); and Metal derivatives of amino acids, peptides and proteins, by R. D. Gillard, R. W. Hay & D. R. Williams (pp. 381-402, 164 ref.). AL

84

[Selected biochemical problems of the food industry.] Wybrane zagadnienia z biochemii przemyslu spozywczego. [Book]
Bijok, B.; Bijok, F.
125pp. (1975) [Pl] Warsaw, Poland; Wydawnictwa Szkolne i Pedagogiczne Price 10zl

The book is intended as a textbook for students of food technology specializing in technical analysis in the food industry. It includes the following chapters: Importance of and advances in biochemistry (pp. 5-7); Water and mineral components in living organisms (pp. 8-15); Pigments and alkaloids in living organisms (pp. 16-22); Carbon metabolism of living organisms (pp. 23-28); Nutrition, digestion, absorption (pp. 29-44); Metabolism of carbohydrates in living organisms (pp. 45-58); Metabolism of lipids in living organisms (pp. 59-63); Metabolism of proteins in living organisms (pp. 64-74); Selected aspects from biochemistry of the baking industry (pp. 75-83); Selected aspects of the biochemistry of fruit and vegetable processing (pp. 84-96); Selected aspects of biochemistry of the fermentation industry (pp. 97-105); Selected aspects of biochemistry of the dairy industry (pp. 106-115); and Selected aspects of biochemistry of the meat industry (pp. 116-124). STI

85

Bibliography of paper and thin-layer chromatography 1970-1973 and survey of applications.
Macek, K.; Hais, I. M.; Kopecky, J.; Schwarz, V.; Gasparic, J.; Churacek, J. (Editors)
Journal of Chromatography Suppl. Vol. No. 5, xviii + 744pp. ISBN 0-444-41299-9 (1976) [5601 ref. En]

This supplementary volume comprises a general bibliography section on techniques of paper chromatography and TLC, and a special part containing references to specific compounds including applications in various foods and food products, milk and milk products. An author and subject index is included. AK

86

Phosphorus chemistry in everyday living. [Book]
Toy, A. D. F.
x + 238pp. ISBN 0-8412-0293-1 (1976) [En] Washington, DC, USA; American Chemical Society Price £12.50

This readable book discusses the chemistry of many P-containing products and processes in everyday life. It includes the following chapters of food interest: Food uses of phosphates (pp. 20-55), including their use in carbonated beverages, bakery products, dairy products, meat products, seafoods etc.; and Phosphates for cleaners, detergents, and dispersants (pp. 69-79). AL

ANALYSIS

87

[Swiss food handbook. Methods for examination and evaluation of foodstuffs and items of utility. . Vol. 2. Part 3. 12th Supplement (1974).] Schweizerisches Lebensmittelbuch. Methoden für die Untersuchung und Beurteilung von Lebensmitteln und Gebrauchsgegenständen. Zweiter Band. Ringbuch III. 12 Lieferung (1974). [Book]
Anon.
49pp. (1974) [De] Berne, Switzerland; Drucksachen- und Materialzentrale

This supplement gives definitions, guidelines for evaluation and analysis, instructions for preparation of material for analysis, and analytical methods for: Bread and bakery products (section 16); and Seasoned salts (section 37C). Subject indexes are included. [See also FSTA (1970) 2 12A374.] AJDW

88

[Physico-chemical methods for the investigation of food products of animal origin.] Fizykochemiczne metody badan srodkow spozywczych pochodzenia zwierzecego. [Book]
Kolobolotskii, G. V.
107pp. (1975) [Pl] Warsaw, Poland; Panstwowe Wydawnictwo Rolnicze i Lesne Price 16zl.

This book, a translation from the Russian original published by 'Kolos', Moscow, USSR, 1971, includes the following chapters: Refractometry (pp. 5-15); Photocolorimetry (pp. 15-34); Luminescence analysis (pp. 34-56); Potentiometrical methods (pp. 56-79); Chromatography (pp. 79-100); and Electrophoresis (pp. 100-106). STI

89

[Testing and evaluation of the quality of food products.] Badanie i ocena jakosci produktow spozywczych. [Book]
Andrzejewski, H.; Fialkowski, B.; Iwinska, I.; Kasperek, M.; Koziol, J.; Krauze, A.; Krauze, J.; Litewka, L.; Meissner, W.; Mikulowska, H.; Monikowski, K.; Mysona, M.; Podkowinska, H.; Rychter, S.; Skolik, J.
752pp. (1974) [many ref. Pl] Warsaw, Poland; Panstwowe wydawnictwo ekonomiczne Price 86zl.

Individual methods used for food product quality testing and the theoretical principals of modern methods of quality evaluation are discussed. The book, designed for specialists in the food industry and food marketing, as well as for scientific institutes and schools, includes: a 1st part, entitled 'General information', which gives the basic terms and criteria for the evaluation of food products and preparation of samples (pp. 13-66); a 2nd part 'The basic methods' (pp. 67-314) covering organoleptic,

physical, optical, electrometrical and chemical test methods; and a 3rd part (Testing and evaluation of food products' (pp. 315-734) which deals with the testing of individual food groups. A subject index is included. STI

90

Food colorimetry: theory and applications. [Book]
Francis, F. J.; Clydesdale, F. M.
x + 477pp. ISBN 0-87055-183-3 (1975) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co. Inc. Price $35 (USA), $36 (Foreign) [Dep. of Food Sci. & Nutr., Univ. of Massachusetts, Amherst, Massachusetts, USA]

This book is devoted mainly to the theory and measurement of colour in foods, with a limited discussion as to causes of colour changes. Sufficient basic theory is provided to allow graduate students to appreciate the interpretation of colour measurement. Chapters are: The nature of light (pp. 1-7); The nature of colour (pp. 8-14, 2 ref.); Color solids (pp. 15-25, 19 ref.); How the eye sees color: anatomy of vision (pp. 26-36, 2 ref.); How the eye sees color: psychology of vision (pp. 37-45, 11 ref.); Color measurement by the addition of colored lights (pp. 46-52); Mathematical specification of color in three-dimensional space and the standard observer (pp. 53-60, 4 ref.); Development of the CIE system (pp. 61-72, 5 ref.); Transmission-reflection spectrophotometry and tristimulus colorimetry (pp. 73-86, 7 ref.); Tristimulus colorimeters (pp. 87-98, 5 ref.); Spectrophotometry and goniophotometry (pp. 99-111, 7 ref.); Visual colorimeters (pp. 112-121, 7 ref.); Wide-range spectrophotometry (pp. 122-129, 16 ref.); Color scales (pp. 130-142, 29 ref.); Color differences (pp. 143-151, 31 ref.); Color tolerances (pp. 152-159, 4 ref.); Kubelka-Munk colorant layer concept (pp. 160-169, 16 ref.); Sample presentation/physical attributes which influence color measurement (pp. 170-178, 1 ref.); [continued in following abstr.] JA

91

Food colorimetry: theory and applications. [Book]
Francis, F. J.; Clydesdale, F. M.
x + 477pp. ISBN 0-87055-183-3 (1975) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co. Inc. Price $35 (USA), $36 (Foreign) [Dep. of Food Sci. & Nutr., Univ. of Massachusetts, Amherst, Massachusetts, USA]

[Continued from preceding abstr.] Tomatoes and tomato products (pp. 179-197, 34 ref.); Orange vegetables (pp. 198-213, 32 ref.); Green vegetables (pp. 214-226, 22 ref.); Cranberry products (pp. 227-240, 24 ref.); Citrus products (pp. 241-258, 39 ref.); Potato products (pp. 259-266, 30 ref.); Cereal products (pp. 267-278, 26 ref.); The chemistry of meat color (pp. 279-291, 25 ref.); The measurement of meat color (pp. 292-308, 22 ref.); Tuna (pp. 309-318, 19 ref.); Salmon (pp. 319-331, 18 ref.); Sugar (pp. 332-344, 21 ref.); Beer (pp. 345-361, 25 ref.); Wine (pp. 362-380, 33 ref.); Tea and coffee (pp. 381-392, 14 ref.); Caramel coloring (pp. 393-404, 6 ref.); Egg yolks (pp. 405-410, 16 ref.); Fats and oils (pp. 411-416, 8 ref.); Dairy products, cocoa, chocolate, peanut butter (pp. 417-423, 14 ref.); Apples, peaches, cherries, strawberries, watermelons (pp. 424-432, 29 ref.); Honey, maple syrup, sugar syrups and molasses (pp. 433-441, 20 ref.); Continuous color measurement (pp. 442-449, 3 ref.); and Computer programs (pp. 450-467). JA

92

Food analysis: analytical and quality control methods for the food manufacturer and buyer. [Book]
Lees, R.
x + 245pp. ISBN 0-249-44146-2 (1975) [many ref. En] London, UK; Leonard Hill Books Price £8.50

This book, which is the 3rd edition of 'Laboratory handbook of methods of food analysis' brings together into one volume those methods of analysis which are of most value to the factory control analyst. It should prove to be an invaluable aid for the control and development chemist and food technologist. In this revised edition the listing of foodstuffs and procedures has been transferred to the front of the book, a method of presentation which should greatly improve the ease of reference. The number of recommended methods has been greatly increased, about 25% more headings have been added and the number of procedures increased by a third. The book has 3 sections: Index to methods of analysis for named foodstuffs (pp. 3-42); Methods of food analysis (pp. 45-187); and Notes on general laboratory methods used in food analysis (pp. 191-232). The third section consists of the following chapters: Sampling (pp. 191-194); Laboratory techniques (pp. 195-202); Chromatography (pp. 203-209); Instrumental and optical techniques (pp. 210-222); Taste panel testing (pp. 223-228); and Useful information for the food analyst (pp. 229-232). [See FSTA (1972) 4 3A166 for Ed. 2.] VJG

93

Sensation and measurement. [Book]
Moskowitz, H. R.; Scharf, B.; Stevens, J. C. (Editors)
xiii + 469pp. ISBN 90-277-0474-0 (1974) [many ref. En] Dordrecht, Netherlands; D. Reidel Publishing Co. Price $39.50 [US Army Natick Lab., Natick, Massachusetts, USA]

The 40 papers in this volume were contributed as a memorial to S. S. Stevens, late professor of Psychophysics at Harvard University. They cover many disciplines, including psychology, physiology and physics. Papers of interest to food scientists include: Similarities of inhibition in the different sense organs [including taste and smell], by G. von Bekesy (pp. 3-21, 14 ref.); On the sensory evaluation of compliant materials [e.g. cheese, dough], by R. Harper (pp. 91-98, 24 ref.); A power function for sensory receptors, by J. J. Zwislocki

(pp. 185-197, 26 ref.), which includes mention of the response of the human chorda-tympani nerve to citric acid, sucrose and NaCl; The effects of caffeine on terminal dark adaption, by A. L. Diamond & E. M. Smith (pp. 339-349, 33 ref.), which relates to the increasing sensitivity of human subjects to light following administration of caffeine compared with a non-caffeine placebo; and Models of additivity for sugar sweetness, by H. R. Moskowitz (pp. 379-388, 12 ref.), in which the sweetness was judged of 9 different sugars mixed at different concn. either with glucose or fructose, and power functions fitted to the sweetness of unmixed sugars were modified to give 2 predictors of mixture sweetness. AL

94

[Food analysis. Vol. 2. Chromatographic methods, including ion exchange.] Lebensmittelanalytik. Band 2. Chromatographische Methoden einschliesslich Ionenaustausch. [Book]
Maier, H. G.
viii + 122pp. ISBN 3-7985-0396-6 (1975) [64 ref. De] Darmstadt, Federal Republic of Germany; Dr. Dietrich Steinkopff Verlag Price DM17.80 [Inst. für Lebensmittelchemie, Tech. Univ., Brunswick, Federal Republic of Germany]

This introductory textbook gives the basic principles and applications of various chromatographic methods of food analysis, illustrated by practical examples. Chapters include: General aspects of chromatographic methods (pp. 1 34); Advantages and disadvantages of the various types of chromatography, and their applications in food chemistry (pp. 35-37); Thin layer chromatography (pp. 38-72); Gas chromatography (pp. 73-87); Ion exchange (pp. 88-97); Paper chromatography (pp. 98-106); Column chromatography (pp. 107-113); and Gel chromatography (pp. 114-116). A 2-pp. bibliography and a 4-pp. subject index are included. [See FSTA (1975) 7 8A445 for Vol. 1 (optical methods).] AJDW

95

[Swiss food handbook. Methods for examination and evaluation of foodstuffs and items of utility. Volume 2. Part 3. 13th supplement (1976).] Schweizerisches Lebensmittelbuch. Methoden für die Untersuchung und Beurteilung von Lebensmitteln und Gebrauchsgegenständen. Zweiter Band. Ringbuch III. 13. Lieferung (1976). [Book]
Anon.
54pp. (1976) [De] Berne, Switzerland; Drucksachen- und Materialzentrale

This supplement to the Swiss food handbook includes the following chapters: Chapter 18, Baking powder and raising agents (11pp.); Chapter 19, Pudding and cream pudding mixes, and prepared puddings and desserts (9pp.); and Chapter 24, Sugar and sugar confectionery (34pp., subdivided into Chapter 24A Sugar and sugar alcohols and Chapter 24B, Sugar confectionery.) Each chapter includes sections on definition of terms, guidelines for analysis and evaluation, and details of methods for organoleptic, chemical and microbiological evaluation of the products under consideration. [See FSTA (1976) 8 3A168 for the preceding supplement.] AJDW

96

[Sensory analysis of food.] Zarys analizy sensorycznej zywnosci. [Book]
Barylko-Pikielna, N.
483pp. (1975) [Pl] Warsaw, Poland; Wydawnictwo Naukowo-techniczne Price 70zl

The book is intended for students of food technology and food technologists working in the field of quality control. It includes the following chapters: Problems in sensory analysis of food (pp. 11-17); Physiological and psychological principles of sensory analysis (pp. 18-53); Visual reception (pp. 54-75); Olfactory reception (pp. 76-119); Taste reception (pp. 120-177); Other senses participating in sensory evaluation (pp. 178-188); Factors affecting the results of sensory analysis (pp. 189-207); Conditions necessary for sensory analysis (pp. 208-240); Laboratory methods (pp. 241-295); Sensory methods of quality control (pp. 296-339); Methods of evaluation by consumers (pp. 340-356); Selected mathematical-statistical methods used in sensory analysis (pp. 357-421); Terms used in sensory analysis and their definitions (pp. 422-429); and Statistical tables (pp. 430-470). STI

97

[Organoleptic analysis of foods of animal origin (milk and dairy products).] Organolepticka analyza potravin zivocisneho povodu. [Book]
Ciganekova, V.; Stefunka, F.
99pp. (1974) [Cs] Bratislava, Czechoslovakia; Vysoka Skola Veterinarska v Kosiciach Vydavatelstve Priroda Price 6Kcs

The publication is intended as a textbook for students of veterinary schools and those working in the fields of food technology. It include the following chapters: The role and importance of organoleptic analysis (pp. 4-5); Methods for examination of foods (pp. 6-11); Basic knowledge on physiology of sensory organs (pp. 12-35); and Methods of organoleptic evaluation of milk and dairy products (pp. 51-99). STI

98

[Methods for analysis of residues of plant protection agents.] Methodensammlung zur Rückstandsanalytik von Pflanzenschutzmitteln. [Book]
Germany, Federal Republic of, Deutsche Forschungsgemeinschaft
164pp. (1974) [De] Weinheim, Federal Republic of Germany; Verlag Chemie GmbH Price DM68

This 3rd supplement to a collection of methods for detn. of residues of plant protection agents in foods and other commodities includes: descriptions of TLC and column chromatographic methods for separation of organochlorine insecticides from hexachlorobenzene and polychlorinated biphenyls;

detailed descriptions of specific methods for detn. of residues of numerous plant protection agents in various commodities; general methods for various groups of plant protection agents; methods for detn. of residues in water; and detailed indexes of the plant protection agents and commodities covered. AJDW

RESIDUES

99

Pesticide residues in food. Report of the 1974 Joint Meeting of the FAO Working Party of Experts on Pesticide Residues and the WHO Expert Committee on Pesticide Residues.
World Health Organization; Food & Agriculture Organization
World Health Organization Technical Report Series No. 574, 37pp. ISBN 92-4-120574-1 (1975) [47 ref. En] [Geneva, Switzerland]

The joint FAO/WHO meeting reviewed toxicological and other relevant data on certain pesticides and their residues, proposing pesticide residue limits and establishing acceptable daily intakes (ADI's) where possible. The recommendations for residue limits and ADI's in named commodities are listed in Annex 1. Specific problems covered were cholinesterase-inhibiting pesticides, nitrosatable pesticides, amitrole and dithiocarbamates, leptophos, DDT, hexachlorobenzene (HCB), and impurities in technical grade pesticides. Data were evaluated for ADI's for dithiocarbamates (new lower temporary ADI), organophosphorus pesticides, amitrole (conditional ADI, use of the pesticide to be restricted to where food residues are unlikely to occur), etc. Data on a number of pesticides were evaluated for residue limits. Annex 2 lists further work or information required or desirable. This report will also be published in Fr, Ru and Es. [Also published as FAO Agricultural Studies (1975) No 97.] [See FSTA (1973) 5 10C275 for 1972 joint FAO/WHO report.] AL

100

Pesticides: a selected bibliography. [Booklet]
Ming-yu Li; Dohn, J.
80pp. (1975) [many ref. En] Davis, California USA; Food Protection & Toxicology Cent., Univ. of California

The references in this bibliography are arranged under the following headings: Manuals, directories, dictionaries, handbooks, etc. (pp. 3-6); Monographs on pest control, pesticides, disease control, insect control and weed control (pp. 7-14); Law, regulations and hearings (pp. 17-20); Statistics and economics (pp. 23-25); Formulations and production (pp. 29-30); Chemistry, analysis and residues (pp. 31-40); Degradation and metabolism (pp. 43-45); Toxicology (pp. 49-54); Public health, including epidemiology, poisoning and occupational exposure safety (pp. 57-60); and Environmental aspects, including contamination, alternative methods, decontamination and disposal, use and application (pp. 63-76). VJG

101

1974 evaluations of some pesticide residues in food.
World Health Organization; Food & Agriculture Organization
WHO Pesticide Residues Series No. 4, viii + 545pp. ISBN 92-4-166504-1 (1975) [many ref. En] [Geneva, Switzerland]

This series of monographs contains information on the nomenclature, structure, properties, acceptable daily intake, toxicology, evaluation, residues in food, analysis, tolerances, appraisal, recommendations, and further work or information required or desired for: amitrole (pp. 3-49, 144 ref.); chlorothalonil (pp. 101-148, 46 ref.); dicloran (pp. 215-245, 57 ref.); dodine (pp. 265-284, 27 ref.); fenamiphos (pp. 295-333, 81 ref.); leptophos (pp. 409-447, 29 ref.); pirimiphos-methyl (pp. 475-526, 38 ref.); and tecnazene (pp. 531-536, 10 ref.). Addenda on some of the above aspects are given for aldrin/dieldrin (pp. 1-2, 1 ref.); azinphos-methyl (pp. 51-62, 7 ref.); binapacryl (pp. 63-64, 1 ref.); captafol (pp. 65-66, 1 ref.); captan (pp. 67-68, 2 ref.); chinomethionat (pp. 69-96, 34 ref.); chlordane (pp. 97-99, 4 ref.); chlorpyriphos (pp. 149-153, 2 ref.); cyhexatin (pp. 155-158, 1 ref.); 2,4-D (pp. 159-183, 28 ref.); dichlofluanid (pp. 185-210, 39 ref.); dichlorvos (pp. 211-213, 3 ref.); dicofol (pp. 247-251, 3 ref.); dinocap (pp. 253-260, 4 ref.); dithiocarbamates (pp. 261-263, 9 ref.); endosulfan (pp. 285-290, 3 ref.); endrin (pp. 291-294, 5 ref.); [continued in following abstr.] AL

102

1974 evaluations of some pesticide residues in food.
World Health Organization; Food & Agriculture Organization
WHO Pesticide Residues Series No. 4, viii + 545pp. ISBN 92-4-166504-1 (1975) [many ref. En] [Geneva, Switzerland]

[Continued from preceding abstr.] Fenitrothion (pp. 335-381, 69 ref.); folpet (pp. 383-394, 18 ref.); heptachlor (pp. 395-396, 6 ref.); hexachlorobenzene (pp. 397-408, 25 ref.); lindane (pp. 449-450, 4 ref.); mancozeb (pp. 451-469, 51 ref.); phosphamidon (pp. 471-473, 7 ref.); pyrethrins (p. 527, 1 ref.); and quintozene (pp. 529-530, 2 ref.). Annexes include a summary of recommendations concerning acceptable daily intakes, tolerances and practical residue limits as of Dec. 1974 (pp. 537-542) and a further 27 references (pp. 543-545). [See FSTA (1975) 7 9C352-353 for 1972 evaluations.] AL

103

Trace substances in environmental health - VI. Proceedings of University of Missouri's 6th annual conference, held at Memorial Union, University of Missouri-Columbia, June 13, 14 and 15, 1972. [Conference proceedings]
Hemphill, D. D. (**United States of America**, Missouri University, Environmental Trace Substances Center & Extension Division) (Editor)
xii + 399pp. (1973) [many ref. En] Columbia, Missouri, USA

The text is given of lectures presented at this symposium, including: Uptake, distribution and concentration of methylmercury by rainbow trout (Salmo gairdneri) tissues, by E. J. Massaro & F. J. Giblin (pp. 107-113, 20 ref.); Studies on methylmercury in northern pike (Esox lucius, L.), by W. L. Lockhart, J. F. Uthe, A. R. Kenney & P. M. Mehrle (pp. 115-118, 7 ref.); and The comparative metabolism of two mercury compounds as environmental contaminants in the freshwater mussel, Margaritifera margaritifera, by P. J. Mellinger (pp. 173-180, 8 ref.). A further 5 papers are abstracted separately in FSTA, and are in the author index under United States of America, Missouri University [Trace Substances Symposium]. AJDW

QUALITY CONTROL

104

[Food control in Switzerland. The work of the food chemist.] Die Lebensmittelkontrolle in der Schweiz. Ein Berufsbild des Lebensmittelchemikers. [Book]
Chemische Rundschau
108pp. (1974) [many ref. De, Fr] Solothurn, Switzerland; Chemie-Verlag Vogt-Schild AG

This collection of papers previously published in 'Chemische Rundschau' includes the following: What does the consumer expect from food control? by H. Aebi (pp. 13-16, De); The Swiss Confederation and food control, by E. Matthey (pp. 17-21, Fr); The efficacy of food control in relation to the current situation, by C. Berner (pp. 22-25, Fr); Food control the international point of view, by J. Ruffy (pp. 26-28, De); Why an association of Swiss Cantonal and municipal chemists? by E. Baumgartner (pp. 29-31, De); Duties of food inspectors and their professional organization, by M. Fell (pp. 32-35, Fr); The reponsibilities and activities of an official laboratory, by R. Brown (pp. 36-39, De); The food chemist - problems with education and train by E. Baumgartner (pp. 40-43, De); Declaration of food constituents, by E. Matthey (pp. 47-50, Fr); Milk and milk products as a specialized problem of food control, by F. Zeder (pp. 51-54, De); Responsibilities and problems of the official chemist in microbiological control of foods, by J. Wicki (pp. 55-60, De); Bacterial toxins and mycotoxins, by E. R. Merk (pp. 61-65, 2 ref., De); [continued in following abstr.]. AJDW

105

[Food control in Switzerland. The work of the food chemist.] Die Lebensmittelkontrolle in der Schweiz. Ein Berufsbild des Lebensmittelchemikers. [Book]
Chemische Rundschau
108pp. (1974) [many ref. De, Fr] Solothurn, Switzerland; Chemie-Verlag Vogt-Schild AG

[Continued from preceding abstr.] Official control of drinking water, by R. Burkard (pp. 66-68, 6 ref., De); Wine - but which? by J. Venetz (pp. 69-71, Fr); Spirits, by Y. Siegwart (pp. 72-77, 3 ref., De); Plastics and the consumer, by E. Baumgartner (pp. 78-81, De); Coloration of foods, by C. Perriard (pp. 86-87, 2 ref., Fr); The significance of pesticide residues in foods for the health of the consumer, by H. R. Weilenmann (pp. 88-90, De); Preservation and freezing of foods, by H. Sollberger (pp. 91-93, Fr); and Meat and meat products in the context of food control, by E. Hauser (pp. 94-98, 3 ref., De). AJDW

PHYSICAL PROPERTIES

106

[Temperature measurement in the food industry.] Teplometriya v pishchevoi promyshlennosti. [Book]
Fedorov, V. G.
176pp. (1974) [77 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.61r

Heat flow measuring methods in food products, and equipment and apparatus used in the food industry are dealt with in the following chapters: Heat flow measuring methods during processes using convection-conduction heaters (pp. 5-25); Heat flow measuring methods during radiation-convection processes (pp. 25-43); Universal apparatus for temperature measurement in the food industry (pp. 43-68); Thermometrical detn. of thermo-physical characteristics (pp. 68-81); Temperature measurement in the bakery industry (pp. 81-110); Temperature measurement during the processing of free-flowing materials (pp. 110-129); Temperature measurement in the meat and milk processing industry (pp. 129-151); and Temperature measurement in cooling equipment (pp. 151-172). STI

107

[Rheological and rheometric problems with foods of plant origin.] Rheologische und rheometrische Probleme bei pflanzlichen Lebensmitteln. [Book]
Klettner, P.-G.; Bielig, H. J.
Fortschritte in der Lebensmittelwissenschaft No. 2, iv + 63pp. ISBN 3-7983-0202-2 (1975) [158ref. De] Berlin, Universitätsbibliothek der Tech. Univ. Price DM6 [Inst. für Lebensmitteltech., Tech. Univ., Berlin (West)]

Chapters in this book, the second in the series 'Fortschritte in der Lebensmittelwissenschaft' are:

Introduction (pp. 1-3); Rheological aspects (pp. 3-15), which discusses the rheology of liquids, solids and foods of plant origin; Texture (pp. 15-33), which discusses texture detn. by sensory and instrumental methods and factors affecting texture Consistency (pp. 33-46), which discusses consistency detn. by sensory and instrumental methods and factors affecting consistency; and Classification of texture and consistency measurement for fruit and vegetable products (pp 46-47). JA

108

[The technology of cooking processes.] Die Technologie der Garverfahren. [Book]
Tilgner, D. J.
326pp. (1974) [many ref. De] Frankfurt am Main, Federal Republic of Germany; Verlagshaus Sponholz Price DM94

This detailed textbook on cooking of foods includes the following chapters: Basic principles of the technology of cooking (pp. 13-24, 17 ref.); Heat transfer and heating of foods (pp. 25-46, 58 ref.); Microwave and infrared heating (pp. 46-75, 87 ref.); Changes in meat during cooking (pp. 75-97, 101 ref.); Roasting (pp. 97-135, 82 ref.); Grilling (pp. 136-161, 33 ref.); Pan-frying (pp. 161-167, 9 ref.); Deep-fat frying (pp. 168-205, 83 ref.); 'Wet' cooking processes (pp. 206-222, 68 ref.); Braising (pp. 222-241, 34 ref.); Steaming (pp. 242-265, 58 ref.); Stewing (pp. 265-278, 26 ref.); Boiling (pp. 279-289, 59 ref.); Cooking of animal products other than meat (i.e. fish, eggs) (pp. 290-296, 22 ref.); Cooking of foods of plant origin (pp. 297-305, 31 ref.); and Sensory evaluation (pp. 305-319, 46 ref.). A 6-page subject index is included. AJDW

MICROBIOLOGY

109

Molds, mushrooms, and mycotoxins. [Book]
Christensen, C. M.
264pp. ISBN 0-8166-0743-5 (1975) [102 ref. En] Minneapolis, Minnesota, USA: Univ. of Minnesota Press Price $11.50 [Dep. of Plant Path., Univ. of Minnesota, Minneapolis, Minnesota, USA]

This book explores the life-cycle of fungi and the relation of fungi to man, emphasis being placed on the harmful effects which some moulds, mushrooms and other fungi have on man. Chapters are: Poisonous and hallucinogenic mushrooms (pp. 7-33); Ergot and ergotism (pp. 34-58); Mycotoxins and mycotoxicoses: aflatoxin (pp. 59-85); Mycotoxins and mycotoxicoses: other Aspergillus species, Penicillium, and Fusarium (pp. 86-113); Airborne fungus spores, plant disease, and respiratory allergy (pp. 114-142); Fungus predators and parasites of nematodes and insects (pp. 143-171); Fungi pathogenic in man and animals (pp 172-199); Decay of wood in trees and buildings (pp. 200-228); and Fungi past and present (pp. 229-246). JA

110

Prevention of microbial and parasitic hazards associated with processed foods. A guide for the food processor. [Book]
United States of America, National Research Council, Committee on Food Protection
viii + 166pp. ISBN 0-309-02345-9 (1975) [many ref. En] Washington, DC, USA; National Academy of Sciences Price $5.75

This report was prepared to identify the more important microbiological problems in the processed food industry and to recommend solutions for these problems. It should prove useful to manufacturers and regulatory agencies. Chapters are: General principles (pp. 3-20, 12 ref.), which discusses foodborne disease agents, fish and shellfish poisoning, and parasitic diseases; Control of food contamination (pp. 21-31), covering raw materials, food ingredients, and factory or processing establishments; Chilled and frozen foods (pp. 32-56, 21 ref.); Dried foods (pp. 57-67, 8 ref.); Nuts, macaroni, and noodle products and dry blended foods (pp. 68-76, 5 ref.); Cured meats and smoked fish (pp. 77-80, 1 ref.); Fermented foods (pp. 81-86, 1 ref.); and Canned foods (pp. 87-110, 27 ref.). The following 5 appendices are included: AFDOUS [Association of Food & Drug Officials of the United States] Frozen Food Code (pp. 111-128); Human foods - current good manufacturing practice (sanitation) in manufacture, processing, packing, or holding: regulations issued under the Federal Food, Drug, and Cosmetic Act (Part 128, Title 21, Code of Federal Regulations) (pp. 129-133); Recommended international code of practice: general principles of food hygiene (pp. 134-144); Recommended international code of hygienic practice for dried fruits (pp. 145-157); and Voluntary code of good practices for peanut product manufacturers (peanut purchasing, handling, storage, sampling, processing, sanitation, testing) (pp. 158-166). JA

111

Conversion and manufacture of foodstuffs by microorganisms. Proceedings of the sixth international symposium held in Kyoto, Japan, Dec. 5-9, 1971. [Conference proceedings]
International Union of Food Science & Technology
viii + 297pp. (1972) [many ref. En] Tokyo, Japan; Saikon Publishing Co. Ltd.

Papers presented at the symposium, sponsored by the Japan Section of the Institute of Food Technologists, include: Development of industrial microbiology in Japan, by K. Sakaguchi (pp. 7-10); Applications of proteases to food processing, by T. Hata & E. Doi (pp. 13-15); Application of Trametes sanguinea enzyme to food processing, by H. Nakatani (p. 17); Use of immobilized enzymes in the food industry, by M. D. Lilly (pp. 65-74, 31 ref.); Application of pectolytic enzymes, by P. W.

Müller (pp. 113-114); Role of inorganic matter in sake making, by S. Takemura (p. 151); Application and elimination of microorganisms in wine-making, by H. Schanderl (pp. 153-158); View of the grape growing and wine industry in Japan, by I. Yokotsuka (pp. 159-160); Fungi as protein for food use, by A. Spicer (pp. 221-223); Recent aspects on microbial fat production, by H. Iwamoto (pp. 225-226); New development in foodstuffs manufacture related to microbial processing of hydrocarbons and petrochemicals, by K. Yamada (pp. 245-248); Regulatory problems and procedures in the clearance of unconventional protein foods, by J. D. Grant (pp. 259-265); Conversion and manufacture of foodstuffs, by N. Molin (pp. 279-282); and Foods in the 21st century: a survey on future food problems, by H. Mitsuda (pp. 283-287). A further 23 papers are abstracted separately and are in the author index under International Union of Food Science & Technology [Food Microorganisms Symposium]. AL

112

Microbiology in agriculture, fisheries and food. [Conference proceedings]
Skinner, F. A.; Carr, J. G. (**United Kingdom**, Society for Applied Bacteriology) (Editors)
Society for Applied Bacteriology Symposium Series No. 4, xv + 274pp. ISBN 0-12-6480-60-5 (1976) [many ref. En] London, UK; Academic Press Inc. (London) Ltd. Price £9.00 [Rothamsted Exp. Sta., Harpenden AL5 2JQ, Hertfordshire, UK]

This book contains the proceedings of the Symposium of the Summer Conference of the Society for Applied Bacteriology, held at Aberdeen Univ. in July 1974. Papers relating to food science and technology are as follows: The microbiological role of nitrite in meat products, by M. Ingram (pp. 1-18, 44 ref.); The role of micro-organisms in poultry taints, by J. L. Peel & J. M. Gee (pp. 151-160, 40 ref.); Microbiological hazards of international trade, by B. C. Hobbs (pp. 161-180, 39 ref.); which discusses the hazards of foods imported to seaports, imported animals, airport foods, air flight meals, and foods served on passenger ships; Vibrio haemolyticus and seafoods, by G. I. Barrow & D. C. Miller (pp. 181-195, 45 ref.); Bacillus cereus food poisoning, by R. J. Gilbert & A. J. Taylor (pp. 197-213, 61 ref.); Trends in methods for detecting food-poisoning toxins produced by Clostridium botulinum and Staphylococcus aureus, by J. S. Crowther & R. Holbrook (pp. 215-225, 36 ref.); and Mycotoxins in food, by B. Jarvis (pp. 251-267, 68 ref.). A further paper is abstracted separately and appears in the author index under **United Kingdom**, Society for Applied Bacteriology [Microbiology Symposium]. JA

113

[Microbiology of food of plant origin.]
Mikrobiologie pflanzlicher Lebensmittel. [Book]
Müller, G.
324pp. ISBN 3-7985-0421-0 (1974) [370 ref. De] Darmstadt, Federal Republic of Germany; Dietrich Steinkopff Verlag Price DM42 [Sektion Nahrungsgüterwirtschaft & Lebensmitteltech., Humboldt-Univ., Berlin (GDR)]

This textbook (intended primarily for students) contains the following chapters: Fruit and fruit products (pp. 19-81); Vegetables and vegetable products (pp. 82-122); Potatoes (pp. 123-129); Edible fungi (pp. 130-133); Sugar, confectionery and honey (pp. 134-146); Cereals, flour, bakery products and starch (pp. 147-170); Fats, oils and fat-rich foods (pp. 171-176); Herbs and spices (pp. 177-184); Drinking water (pp. 185-198); Non-alcoholic beverages (pp. 199-206); Alcoholic beverages (pp. 207-243); Coffee, tea, cocoa and tobacco (pp. 244-248); Utilization of microorganisms for production of organic acids, fats, amino acids, proteins, enzymes and vitamins (pp. 249-290); and Production and use of algae and algae products as foods and feeds (pp. 291-295). A 13-page subject index is given. AJDW

114

Microorganisms in foods. 2. Sampling for microbiological analysis: principles and specific applications. [Book]
International Association of Microbiological Societies, International Commission on Microbiological Specification for Foods
xi + 213pp. ISBN 0-8020-2143-3 (1974) [many ref. En] Toronto, Canada; Univ. of Toronto Press Price $25

The primary aims of this book are to draw attention to the unsatisfactory nature of casual sampling and to provide information necessary to improve the situation. Its immediate objectives are: to describe what different sampling plans can achieve in principle; to establish their significance for the interpretation of the results of microbiological testing of foods; and to offer guidance as to the choice of appropriate sampling plans in different situation. The book contains 2 sections: Principles (pp. 1-77) and Specific proposals for sampling and sampling plans (pp. 79-155), each containing several chapters. Chapters are: Concepts of probability and sampling (pp. 3-8); Principles of drawing samples (pp. 9-18); Appropriate sampling plans (pp. 19-31); Choice of a sampling plan according to purpose (pp. 32-64); Sampling plans for situations involving direct hazard from pathogens (pp. 65-75); Control at source (pp. 76-77); Collecting and handling field samples and sample units (pp. 83-91); Sampling plans for fish and fishery products (pp. 92-104); Sampling plans for vegetables (pp. 105-109); Sampling plans for dried foods (pp. 110-118); Sampling plans for frozen foods (pp. 119-125); Sampling plans for milk and milk products (pp. 126-136); Sampling plans for raw meats (pp. 137-141); Sampling plans for processed meats (pp. 142-146); Sampling plans for shelf-stable canned foods (pp. 147-152); and Microbiological evaluation of fresh or frozen raw shellfish (pp. 153-155). [Continued in following abstr.] JA

115

Microorganisms in foods. 2. Sampling for microbiological analysis: principles and specific applications. [Book]
International Association of Microbiological Societies, International Commission on Microbiological Specification for Foods
xi + 213pp. ISBN 0-8020-2143-3 (1974) [many ref. En] Toronto, Canada; Univ. of Toronto Press Price $25

[Continued from preceding abstr.] Also included are 6 appendices: Program of the International Commission on Microbiological Specifications for Foods (ICMSF) (pp. 161-162); Members, subcommission members and consultants of ICMSF (pp. 163-167); Members of subcommittees active in the preparation of this text (p. 168); Contributors to the sustaining fund of ICMSF (pp. 169-170); A proposed statement of policy on the commercial processing of foods in hermetically sealed containers (p. 171); and Sanitation of shellfish growing areas (pp. 172-189, 45 ref.). The book concludes with a glossary (pp. 193-196); references (pp. 197-202); and a subject index (pp. 203-213). [See FSTA (1971) 3 2B14 for companion vol.] JA

116

[Food and moulds, an introduction to food mycology.] [Book]
Tsuruta, O.; Udagawa, S.
382pp. (1975) [many ref. Ja] Tokyo, Japan; Ishiyaku Publishers Inc.

This monograph consists of 3 sections, covering Morphology and ecology of fungi (pp. 3-157), Fungi in food (pp. 161-260) and Fungal aspects of food hygiene, including mycotoxins (pp. 263-268). Species and subject indexes are included. JMD

117

Glossary of bacteriological terms. [Book]
Samson, P.
v + 155pp. ISBN 0-407-00003-8 (1975) [En] London, UK; Butterworth & Co. (Publishers) Ltd. Price £2.50 [Clinical Lab., Brompton Hospital, Frimley, Surrey, UK]

Under the general editorship of F. J. Baker, this glossary provides a quick source of reference to terms used in medical laboratories and many applicable to food microbiology laboratories. It is suitable for newcomers to the profession and students. Each entry is more detailed and descriptive than will be found in medical dictionaries but an alphabetical form is retained for ease of reference. Groupings given in this book, particularly classification of bacteria, represent a balance of current opinions. GL

ENZYMES

118

Immobilized enzymes in food and microbial processes. [Conference proceedings]
Olson, A. C.; Cooney, C. L. (**United States of America**, American Chemical Society) (Editors)
x + 268pp. ISBN 0-306-30789-8 (1974) [many ref. En] London, UK; Plenum Press Price £9.80 [W. Regional Res. Lab., Agric. Res. Service, USDA, Berkeley, California, USA]

Papers presented at the Symposium, which was held at the 166th National Meeting of the American Chemical Society, Chicago, Illinois, 1973, include: Present and future trends in enzyme technology and its application, by E. K. Pye (pp. 1-18, 26 ref.); Glucose isomerase cells entrapped in cellulose acetates, by M. J. Kolarik, B. J. Chen, A. H. Emery Jr., & H. C. Lim (pp. 71-83, 4 ref.); Glucose isomerase: a case study of enzyme-catalysed process technology, by B. K. Hamilton, C. K. Colton & C. L. Cooney (pp. 85-131, many ref.); Immobilized α-amylase for clarification of colloidal starch-clay suspensions, by K. L. Smiley, J. A. Boundy, B. T. Hofreiter & S. P. Rogovin (pp. 133-147, 16 ref.); Immobilized glucose oxidase and catalase in controlled pore titania, by R. A. Messing (pp. 149-156, 3 ref.); Collagen as a carrier for enzymes: materials science and process engineering aspects of enzyme engineering, by F. R. Bernath & W. R. Vieth (pp. 157-185, 19 ref.); The immobilization of enzymes with imidoester-containing polymers, by O. R. Zaborsky (pp. 187-203, 21 ref.); and Biological technology - plea for a new commitment, by G. T. Tsao (pp. 253-258). Another 5 papers are abstracted separately and are in the author index under **United States of America**, American Chemical Society [Symposium]. VJG

119

[First symposium on the production and application of enzyme preparations in the food industry and for livestock production.] Pervyi simpozium 'Proizvodstvo i primenenie fermentnykh preparatov v pishchevoi promyshlennosti i zhivotnovodstve'. [Conference proceedings]
Union of Soviet Socialist Republics
Koordinatsionnyi Tsentr po Probleme 'Povyshenie Pishchevoi Tsennosti Sushchestvuyushchikh i Sozdanie Novykh Vidov Vysokokachestvennykh Produktov Pitaniya'
747pp. (1974) [many ref. Ru]

Papers given at the symposium, held in Varna, Bulgaria, in 1974, included: Production of powdered glucose with a high dextrose equivalent using enzymic hydrolysis of starch, by I. Vasilescu, M. Stoika, I. Raiu & O. Butoi (pp. 85-95); Selection of strains with respect to biosynthesis of cytolytic enzymes and the characteristics of the enzyme preparations obtained, by E. Galyus, K.

Sivinska & H. Bratkowska (pp. 143-158); The production and action of a selected complex of cellulolytic enzymes, by J. Hanus & M. Gottwaldova (pp. 198-210); Requirements for enzyme preparations in the starch industry, by T. A. Ladur & Z. M. Borodina (pp. 233-246); The application of enzyme preparations in the starch industry, by M. Remishevski (pp. 247-257, 10 ref.); Shortening the time for production of ethyl alcohol from starchy raw materials by using microbial enzymes, by B. A. Ustinnikov & V. L. Yarovenko (pp. 258-265); Production and application of glucoamylase preparation, by E. Sep (pp. 266-276); Improving the carbohydrate composition of wort by means of enzyme preparations, by N. V. Pokrovskaya & O. V. Kislyakov (pp. 447-463, 6 ref.); Immobilized enzymes and their uses, by J. Kucera & J. Hanus (pp. 473-486); Automated method for detn. of glucosidase in a complex enzyme preparation used in brewing, by K. Walter (pp. 501-506); The characteristics of glucoamylase, by H. Rutloff (pp. 518-525) [continued in following abstr.]. STI

120

[First symposium on the production and application of enzyme preparations in the food industry and for livestock production.] Pervyi simpozium 'Proizvodstvo i primenenie fermentnykh preparatov v pishchevoi promyshlennosti i zhivotnovodstve'. [Conference proceedings]
Union of Soviet Socialist Republics, Koordinatsionnyi Tsentr po Probleme 'Povyshenie Pishchevoi Tsennosti Sushchestvuyushchikh i Sozdanie Novykh Vidov Vysokokachestvennykh Produktov Pitaniya'
747pp. (1974) [many ref. Ru]

[Continued from preceding abstr.] Studies of use of ultra-filtration for purification of pectolytic preparations, by G. Klyushnik, V. Rzhendovski & E. Rembovski (pp. 526-536); Hydrolysis of various muscle fractions by means of proteolytic enzymes, by N. Nestorov, A. Grozdanov, P. Konishev & G. Uzunov (pp. 537-542); The effect of pH and temp. on activity of glucose oxidase, by S. Chara (pp. 603-636, 17 ref.); Insoluble alpha-amylase of fungal origin, by T. Angelov, I. Grigorov & M. Angelova (pp. 652-664, 6 ref.); and Investigations into the possibilities of combining proteolytic preparation E-30 with proteases of plant origin, by A. Grozdanov (pp. 665-673, 4 ref.). A further 19 papers are abstracted separately in FSTA and indexed under **Union of Soviet Socialist Republics,** Koordinatsionnyi Tsentr po Probleme 'Povyshenie Pishchevoi Tsennosti Sushchestvuyushchikh i Sozdanie Novykh Vidov Vysokokachestvennykh Produktov Pitaniya' [Enzyme Symposium]. STI

121

Enzyme Engineering. Volume 2. [Book]
Pye, E. K.; Wingard, L. B., Jr. (Editors)
xiv + 470pp. ISBN 0-306-35282-6 (1974) [many ref. En] New York, USA; Plenum Press Price £14.60 [Dep. of Biochem., School. of Med., Univ. of Pennsylvania, Philadelphia, Pennsylvania]

This book consists of papers from the Second Engineering Foundation Conference held 5-10 Aug. 1973 at Henniker, New Hampshire. Contributions are in the sections, Enzymes: Regulation and new sources; New purification techniques; New immobilization techniques and supports; Immobilized multi-step enzyme systems; Physical methods for examining immobilized enzymes; Use of immobilized coenzymes; Reactor design; Industrial applications of immobilized enzymes; Commercial aspects of enzymes; and New applications of enzymes. [FSTA (1973) 5 7A352 for Vol. 1]. LMB

122

[Radiometric methods for determination of enzyme activities.] Radio-metricheskie metody opredeleniya aktivnosti fermentov. [Book]
Meerov, G. I.
60pp. (1974) [Ru] Moscow, USSR; Atomizdat Price 0.42r

The book is intended for specialists who use in their work highly sensitive and accurate methods for detn. of enzyme activities. It includes the following chapters: Radiometric methods for detn. of activities of oxido-reductases (pp. 5-9); Radiometric methods for detn. of activities of transferases (pp. 10-18); Radiometric methods for detn. of activities of hydrolases (pp. 19-30); Radiometric methods for detn. of activities of lyases (pp. 31-34); Radiometric methods for detn. of activities of ligases (p. 35); and Radiochemical purity of certain natural ^{14}C organic compounds - ^{14}C-substrates (pp. 36-51). STI

123

Lipolytic enzymes. [Book]
Brockerhoff, H.; Jensen, R. G.
x + 330pp. ISBN 0-12-134550-5 (1974) [32pp. of ref. En] New York, USA; Academic Press Inc. Price $24.50 [New York State Inst. for Basic Res. in Mental Retardation Staten Island, New York, USA]

This book summarizes the present knowledge of lipolytic enzymes. Pancreatic lipase and phospholipase 2 are given very detailed coverage as in addition to being the most thoroughly investigated lipolytic enzymes, they may serve as models for all others. The following chapters are included: Introduction (pp. 1-3); Nomenclature (pp. 4-9); Kinetics of lipolysis (pp. 10-24); Lipases (pp. 25-175); Cholesterol esterase (pp. 177-193); Phospholipases: carboxyl esterases (pp. 197-265); Phospholipases: phosphohydrolases (pp. 266-288); and Synopsis (pp. 289-292). The chapter on lipases includes the following types: pancreatic lipase (pp. 34-90); lipoprotein lipase (pp. 95-108); tissues lipases (pp. 108-118); milk lipases (pp. 118-129); plant lipases (pp. 129-139); and microbial lipases (pp. 139-168). VJG

124

Enzymes in food processing. [Book]
Reed, G. (Editor)
Ed. 2, xvi + 573pp. ISBN 0-12-584852-8 (1975) [many ref. En] New York, USA; Academic Press, Inc. Price £18.95 [Universal Foods Corp., Milwaukee, Wisconsin, USA]

This 2nd edition (1st edition published in 1966) of the book, a volume in the Food Science and Technology Series of Monographs, has been completely revised, up-dated and expanded. Chapters are: Introduction, by G. Reed (pp. 1-5, 13 ref.); The nature of enzymatic reactions, by G. Reed (pp. 7-13, 12 ref.); General characteristics of enzymes, by G. Reed (pp. 15-29, 20 ref.); Effect of temperature and pH, by G. Reed (pp. 31-42, 19 ref.); Enzyme inhibition and activation, by G. Reed (pp. 43-51, 35 ref.); Carbohydrases, by K. Kulp (pp. 53-122, many ref.); Proteolytic enzymes, by A. Yamamoto (pp. 123-179, many ref.); Lipases and esterases, by K. M. Shahani (pp. 181-217, 106 ref.); Oxidoreductases, by D. Scott (pp. 219-254, 105 ref.); Production of microbial enzymes, by J. Meyrath & G. Volavsek (pp. 255-300, 90 ref.); Enzyme uses in the milling and baking industries, by F. F. Barrett (pp. 301-330, 85 ref.); Modified starches, corn syrups containing glucose and maltose, corn syrups containing glucose and fructose, and crystalline dextrose, by R. V. MacAllister, E. K. Wardrip & B. J. Schnyder (pp. 331-359, 74 ref.); [Continued in following abstr.]. JA

125

Enzymes in food processing. [Book]
Reed, G. (Editor)
Ed. 2, xvi + 573pp. ISBN 0-12-584852-8 (1975) [many ref. En] New York, USA; Academic Press, Inc. Price £18.95 [Universal Foods Corp., Milwaukee, Wisconsin, USA]

[Continued from preceding abstr.] Dairy industry, by G. H. Richardson (pp. 361-395, many ref.); Fruits, fruit products, and wines, by C. E. Neubeck (pp. 397-442, many ref.); Distilled alcoholic beverages, by D. A. Brandt (pp. 443-453, 17 ref.); Beer, by E. J. Bass & T. Cayle (pp. 455-471, 26 ref.); Meat and other proteinaceous foods, by H. F. Bernholdt (pp. 473-492, 39 ref.); Miscellaneous applications of enzymes, by D. Scott (pp. 493-517, 54 ref.); Applications of glucose oxidase, by D. Scott (pp. 519-547, 62 ref.); and Health and legal aspects of the use of enzymes, by G. Reed (pp. 549-554, 12 ref.). JA

126

Handbook of enzyme biotechnology. [Book]
Wiseman, A. (Editor)
xii + 275pp. ISBN 0-470-95617-8; SBN 85312-023 4 (1975) [many ref. En] New York, USA; Halsted Press & Chichester, UK; Ellis Horwood Ltd. Price $33; £15 [Dep. of Biochem., Univ. of Surrey, Guildford, Surrey, UK]

This book is divided into 2 parts: Principles of enzyme production and utilization (pp. 5-124); and Data for industrial application of enzymes (pp. 127-272). Chapters included are: Introduction to principles, by A. Wiseman (pp. 3-4); Principles of industrial enzymology, by B. J. Gould (pp. 5-26, 67 ref.); Large-scale production of enzymes: techniques in fermentation, by W. A. Vincent & G. Priestley (pp. 27-57, 93 ref.); Large-scale extractior and purification of enzymes, by J. Melling & B. W. Phillips (pp. 58-88, many ref.); Principles of immobilized-enzyme technology, by S. A. Barker & I. Kay (pp. 89-110, many ref.); Enzyme utilization in industrial processes, by A. Wiseman (pp. 111-124, 34 ref.); Introduction to data, by A. Wiseman (p. 127); Enzyme data, by B. J. Gould (pp. 128-162, 76 ref.); Fermentation data and equipment (and their manufacturers), by W. A. Vincent & G. Priestley (pp. 163-180); Practical aspects of large-scale enzyme purification, by J. Melling & B. W. Phillips (pp. 181-202, 12 ref.); Data on techniques for enzyme immobilization, by S. A. Barker & J. F. Kennedy (pp. 203-242, many ref.); and Industrial practice with enzymes, by A. Wiseman (pp. 243-272, 10 ref.). VJG

127

Enzyme handbook. Supplement 1. [Book]
Barman, T. E.
iv + 517pp. ISBN 3-540-06761-2 (1974) [many ref. En] Heidelberg, Federal Republic of Germany; Springer-Verlag Price $26.10; DM60 [Nat. Inst. for Res. in Dairying, Shinfield, Reading RG2 9AT, UK]

This supplement provides, in a concise form, molecular and catalytic data on 430 enzymes described after the publication of Vol. I and II of the enzyme handbook [FSTA (1970) 2 5A162]. The enzymes are arranged according to the 1972 Recommendations on the Nomenclature and Classification of Enzymes. The following details, where available, are given for each enzyme: equilibrium constant of the reaction catalysed; molecular data (mol. wt., carbohydrate and lipid contents, multiplicity, prosthetic group, stable enzyme-substrate complexes, active site, irreversible inhibitors); catalytic data (specificity, kinetic constants, metal ion or other activators); and light absorption data of substrates. JA

HYGIENE AND SANITATION

128

[Hygiene in nutrition.] Hygiena vyzivy. [Book]
Oravcova, V.; Kis, J.
239pp. (1974) [Cs] Prague, Czechoslovakia; Avicenum-Zdravotnicke nakladelstvi Price Kcs 18.50

The book is intended as a textbook for students in medical schools. It includes the following chapters: The importance of nutrition (pp. 11-21); The value of foods (pp. 21-26); Food and its constitutents (pp. 26-42); Food consumption (pp.

42-46); Properties, nutritional value and hygiene of foods (pp. 46-151); Food preservation (pp. 151-163); Food packaging with respect to hygiene (pp. 163-166); Diseases and poisoning due to foods (pp. 166-180); Hygiene of food distribution (pp. 180-185); Food sampling (pp. 185-195); Communal feeding (pp. 195-211); Types of nutrition (pp. 211-220); Preparation of food (pp. 220-226); and Organization of hygiene and sanitation in the field of nutrition (pp. 226-231). STI

129

Toxicity of pure foods. [Book]
Boyd, E. M.
260pp. ISBN 0-87819-035-X (1973) [many ref. En] Cleveland, Ohio, USA; CRC Press

This book deals with the toxicity of pure foods, and not with aspects of food toxicity due to food additives and contaminants. It includes: Indications that pure foods may have toxic effects (food intake and lipid metabolism, and studies on vitamin deficient diets) (pp. 1-21); Toxicity of carbohydrates (sucrose, glucose, gum tragacanth and starch) (pp. 23-69); Oral toxicity of fats and oils (maize oil, cottonseed oil, mineral oil and rancid fats) (pp. 71-111); Oral toxicity of proteins (raw egg white powder, casein preparations and high protein diets) (pp. 113-145); Oral toxicity of water and salts (distilled water, NaCl, KCl, Fe, and silicates and insoluble salts) (pp. 147-211); and Toxicity of food adjuvants (food toxicants and caffeine, tannic acid, and atropine and pilocarpine) (pp. 213-243). Numerous ref. are given at the end of each chapter. A 16 pp. index is included. AL

130

Food processing hygiene. [Book]
Cook, D. J.; Binsted, R.
71pp. ISBN 0-900379-17-0 (1975) [En] London, UK; Food Trade Press Ltd. Price £3 [Campden Food Preservation Res. Ass., Chipping Campden, Glos., UK]

This book gives information on diseases which can be caused by inadequate attention to hygiene in the handling, preparation, processing or manufacture of food and how this can be avoided. Chapters are: What do we mean by disease (pp. 2-10); How disease spreads (pp. 11-24); and The control of disease (pp. 25-47). Appendices include: hygiene microbiology definitions; tabulations of bacterial, rickettsial and viral pathogens, human diseases transmitted by insect and animal bite, and groups of disease-causing microorganisms; some basic sources of natural microbial contamination of foods - raw materials; food-borne infection and intoxication; and notes on food poisoning. AL

131

[Toxicology of food.] Toxikologie der Nahrungsmittel. [Book]
Lindner, E.
x + 149pp. ISBN 3-13-490801-8 (1974) [many ref. De] Stuttgart, Federal Republic of Germany; Georg Thieme Verlag Price DM11.80 [Univ., Giessen, Federal Republic of Germany]

This book gives brief discussions of the occurrence and toxicity of numerous toxic materials in foods. Sections are: Toxic materials in natural foods (pp. 1-86); Toxic materials present in foods as a result of spoilage or unsuitable processing (pp. 87-109); Toxic materials present in foods as a result of storage and preparation (pp. 110-117); Additives in foods (pp. 118-135); and Food allergy (pp. 136-140). A 9-page subject index is included. AJDW

132

Environmental quality and safety. Supplement Vol. I. Heavy metal toxicity, safety and hormology. [Book]
Luckey, T. D.; Venugopal, B.; Hutcheson, D. P.
120pp. ISBN 3-13-516301-6 (Georg Thieme); ISBN 0-12-227061 (Academic Press) (1975) [many ref. En] Stuttgart, Federal Republic of Germany; Georg Thieme Publishers & New York, USA; Academic Press. Price DM35 [Univ. of Missouri, Columbia, Missouri 65201, USA]

Chapters in this book are: Introduction, by T. D. Luckey (pp. 1-3); Toxicology of non-radioactive heavy metals and their salts, by B. Venugopal & T. D. Luckey (pp. 4-73); Safety of heavy metals as nutritional markers, by D. P. Hutcheson, D. H. Gray, B. Venugopal & T. D. Luckey (pp. 74-80); Hormology with inorganic compounds, by T. D. Luckey (pp. 81-103); and References (pp. 104-118). [See FSTA (1974) 6 11A499 & 11A500 for Vol. II.] AL

133

Our polluted food. A survey of the risks. [Book]
Lucas, J.
xi + 237pp. ISBN 0-85314-225-4 (1975) [many ref. En] 25 New Street Square, London, UK; Charles Knight & Co. Ltd. Price £4.95 [Radiological Protection Service, Univ. of Manchester, Manchester, UK]

The purpose of this book is to review the data on food and human pollution by products of agricultural, industrial and domestic operations. It should be of value to all those involved or interested in the problems of food and the environment. Chapters are: Basic principles (pp. 1-35, 15 ref.); Agricultural pollution of food. Part I. Pesticide residues (pp. 36-76, 16 ref.); Agricultural pollution of food. Part II. Miscellaneous problems (pp. 77-105, 15 ref.) [which covers nitrates, antibiotics, hormone residues, bacterial contamination, and polycyclic hydrocarbons in diesel engine fumes]; Radioactive pollution of food (pp. 106-155, 16 ref.); Industrial pollution by the mineral elements (pp. 156-185, 15 ref.); Lead (pp. 186-202, 14 ref.); and Perspectives and prospects for the future (pp. 203-227, 13 ref.). JA

134

Consumer health and product hazards - cosmetics and drugs, pesticides, food additives. Vol. 2 of the legislation of product safety. [Book]
Epstein, S. S.; Grundy, R. D. (Editors)
xi + 389pp. ISBN 0-262-05015-3 (1974) [many ref. En] Cambridge, Massachusetts, USA; MIT Press [Case Western Reserve Univ. Med. School, Cleveland, Ohio, USA]

This book reviews the incorporation of public health and environmental concerns into national policies and practices for regulating consumer products. Chapters include: The concepts of new consumerism, by R. D. Grundy (pp. 1-71, 48 ref.); Pesticides: regulation of an evolving technology, by J. E. Blodgett (pp. 197-287, 104 ref.); Principles of food additive regulation, by J. Turner (pp. 289-321, 26 ref.); and The FTC's new look: a case study of regulatory revival, by H. Wellford (pp. 323-367, 53 ref.). GL

INDUSTRIES, STATISTICS, MANAGEMENT, ECONOMICS

135

[Brief tables on the nutritional value of food products.] Skrocene tabele wartosci adzywczej produktow spozywczych. [Book]
Szczygiel, A.; Piekarska, J.; Klimczak, Z.
46pp. (1974) [Pl] Warsaw, Poland; Panstwowy Zaklad Wydawnictw Lekarskich. Price 20zl

The tables include data on the calorific value, and protein, fat, Ca, P, Fe, Mg and individual vitamin contents of the following: milk and milk products, eggs, meat, canned meats, poultry, game, smoked products, fish and various products, fats and oils, cereals and cereal products, legumes, vegetables, vegetable products, mushrooms, fruit (fresh and processed), nuts, sugar, conc. soups, and frozen ready-to-serve meals. STI

136

The market for cashew-nut kernels and cashew-nut shell liquid. [Book]
Wilson, R. J.
Report, Tropical Products Institute G91,
vii+120pp. ISBN 0-85954-035-9 (1975) [En] Price £1.40 [Tropical Products Inst., 56/62 Gray's Inn Road, London WC1X 8LU, UK]

This report is divided into 3 parts: Production, processing of, and trade in raw cashew nuts; The market for cashew nut kernels; and The market for cashew nut shell liquid. The information in part I is arranged under the following headings: Cultivation, harvesting and products of the cashew tree (pp. 19-20); Processing of the cashew-nut (p. 20); Grading of cashew-nut kernels for export (pp. 21-22); Production and primary marketing of cashew-nuts (pp. 22-24); Development of processing in major production areas (India, East Africa, and Brazil) (pp. 24-26); Trade in raw cashew-nuts (pp. 26-28); and Prospects (pp. 28-30). Part II consists of the following topics: Exports (pp. 31-33); Imports (pp. 33-36); Consumption patterns (roasted and salted cashew kernels, and confectionery and bakery) (pp. 36-39); Marketing systems (pp. 39-40); Market studies of certain consuming countries (USA, Canada, Netherlands, Federal Republic of Germany, France, United Kingdom, Eastern Europe, Australia) (pp. 40-49); Prices (cashew-nut kernels, and raw cashew-nuts) (pp. 50-53); and Prospects (pp. 53-55). 8 appendices are included. VJG

137

[Statistical report on the dairy industry in the Federal Republic of Germany and other EEC member states. Section 2. Co-ordination of planning and economic surveying. Report 223: Market studies - domestic and EEC.] Statistischer Bericht über die Milch- und Molkereiwirtschaft in der Bundesrepublik Deutschland und den EG-Mitgliedstaaten. Abteilung 2. Planungskoordination und Wirtschaftsbeobachtung. Referat 223: Marktbeobachtung - Inland und EWG. [Book]
Reckenfelderbäumer, L.; Völkl, H.; Hafenmayer, H. **(Germany, Federal Republic of,** Bundesministerium für Ernährung, Landwirtschaft & Forsten) (Editors)
99pp. (1975) [De] Bonn, Federal Republic of Germany

This report is divided into 2 main parts. The 1st part contains 50 tables of statistics for the Federal Republic of Germany over the years 1971 to 1974, relating to fodder supplies, numbers of dairy farmers and dairy cows, average milk and fat yields, total milk production and utilization, manufacture, consumption, prices, exports and imports of dairy products, number of minutes' work needed to earn a particular quantity of a dairy product, etc. The 2nd part contains 31 tables of similar statistics for the 9 member countries of the EEC. [See FSTA (1975) 7 4D139 for previous report.] ADL

138

[Changes in and forecasting of food consumption.] Przemiany i prognozy konsumpcji zywnosci. [Book]
Budzynski, F.
250pp. (1975) [many ref. Pl, en] Warsaw, Poland; Panstwowe Wydawnictwo Naukowe. Price 45zl

The book includes an analysis of past and present food consumption, which could serve for forecasting future trends, with special emphasis on long-term prognosis. The following chapters are included: Food consumption in the course of history (pp. 29-78); Nutrition and the health of the world population (pp. 78-98); Scientific principles of food consumption development (pp. 131-181); Some data on food consumption development in Poland (pp. 181-206); and New food resources (pp. 206-247). STI

139

[The application of computers at the Moscow Dairy Association 'Moloko.] Primenenie vychislitel'noi tekhniki v moskovskom ob'edinenii "Moloko". [Book]
Antonov, N. I.; Koshelev, L. G.
127pp. (1974) [13 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 0.32r

Experience with the application of computers is discussed on the example of 'Moloko' enterprise. Recommendations are presented for the choice of automated management system. The following chapters are included: Conditions necessary and stages for the elaboration of automated management system at the 'Moloko' enterprise; Technical means used; Set up and tasks of the information and computing centre; Mechanization of book keeping and accounting operations; and Evaluation of the factors of management improvement as a result of the introduction of the computing techniques. STI

140

A study of the evolution of concentration in the Irish food industry 1968-1973. [Book]
Commission of the European Communities
103pp. (1975) [En] Brussels, Belgium Price £2.00

141

A survey of purchasing and consumption habits of dairy products in the Dublin area. [Book]
Wafer, B.; Shanahan, U.
38pp. (1974) [6 ref. En] Dublin, Irish Republic; An Foras Taluntais Price £1.00 [Economics & Ruval Welfare Res. Cent., Sandymount Ave, Dublin 4, Irish Republic]

142

UK food industries review 1975-1976. [Book]
Marshall, A. N. (Editor)
xi + 417pp. ISBN 0-7161-0227-7 (1974) [En] Epping, Essex, UK; Gower Press Ltd. Price £30

Part 1 of this comprehensive review (covering mainly 1970-1973) defines the size and structure of the UK food industry, employment, investment, dependence on international trade, detailed research on commodity movements and prices, assessment of the effect of EEC membership, economic analysis of the domestic market (overall and regional patterns, consumer expenditure), retail trade, future patterns, and profiles of 19 major supermarket groups. Part 2 presents in-depth profiles of the 12 major food sectors (cereals, bread and flour, cakes and biscuits, meat, fish, dairy products, sugar, chocolate and sugar confectionery, fruit and vegetables, non-alcoholic beverages, alcoholic drinks, and tobacco), dealing with product range consumption patterns, market structure, costs/prices, and prospects. Part 3 sets out profiles on the leading 100 companies engaged in the manufacture of food, drink and tobacco products, giving details of the principal activities, range of products, trading performance, and diversification both into and out of the UK food, drink and tobacco industry. An in-depth breakdown of 20 of the largest firms is also incorporated. AL

143

Market commentary. Grains and oilseeds. [Conference proceedings]
Carmichael, J. S.; Duncker, H. W.; Adnam, D. (Canada, Agriculture Canada, Economics Branch)
41pp. (1975) [En] Ottawa, Canada

This report, comprising papers presented at the Canadian Agricultural Outlook Conference held in Ottawa, Dec. 15-16, 1975, covers the situation and outlook for wheat, feed grains and oilseeds (rapeseed, flaxseed, soybeans and sunflower seed), world and Canadian situation for 1974/1975 and 1975/1976, and the outlook for 1975/1976 and 1976/1977. Tabular data are presented on supply, disposition, trade, prices, etc. [See FSTA (1974) 6 6D219 for 1974 conference.] AL

144

Market commentary. Horticulture and special crops. [Conference proceedings]
Anderson, R. W.; Longmuir, N. L.; Teeter, N. J. (Canada, Agriculture Canada, Economics Branch)
83pp. (1975) [En] Ottawa, Canada

This report, comprising papers presented at the Canadian Agricultural Outlook Conference held in Ottawa on Dec. 15-16, 1975, covers the situation and outlook for major horticultural crops (apples, tender tree fruit, berries, potatoes, other vegetables, honey, maple products) and other special crops (including dry beans, dry peas, buckwheat, mustard seed, and sugar). Detailed figures are presented for the production, exports, imports, utilization and processing of individual fruits and vegetables and sugar in Canada, and for production in individual provinces for 1963-1975. [See FSTA (1974) 6 6D219 for 1974 conference.] AL

145

Market commentary. Animals and animal products. [Conference proceedings]
Boswell, A. M.; Smith, L. D.; McCormick, V.; Lussier, J. G. (Canada, Agricultural Canada, Economics Branch)
67pp. (1975) [En] Ottawa, Canada

This report, comprising papers presented at the Canadian Agricultural Outlook Conference held in Ottawa on Dec. 15-16, 1975, contains situation and outlook papers for beef cattle, hogs, sheep and lambs, poultry and eggs, and the dairy industry in Canada. Tabulated data are given for output, prices, consumption, exports and imports for various periods between 1963 and 1975. [See FSTA (1974) 6 6D219 for 1974 conference.] AL

146

EEC dairy facts and figures. [Book]
United Kingdom, Milk Marketing Board, Economics Division
xiii + 118pp. (1974) [En] [Thames Ditton, Surrey, UK]

This report includes tabulated data on EEC prices of dairy products (pp. 15-20), dairy farming (pp. 27-47: giving cow numbers, size structure and composition of dairy herds, milk yields and fat content, production and disposal of milk, etc.), milk utilization (pp. 49-54: including details of utilizatior of whole milk on farms and in dairies and total utilization of whole and skim-milk), the structure of the milk industry (pp. 55-62: size structure of butter creameries, cheese factories, dried milk plants etc.), the liquid milk market (pp. 63-68: milk and cream sales, milk retail prices and yoghurt production), milk products (pp. 69-88: butter, cheese, condensed milk, dried whole and skim-milk, and casein production, supplies and disappearance), trade in milk and milk products (pp. 89-103), and consumption of liquid milk and milk products (pp. 105-107). [See FSTA (1974) **6** 3D91 for 1973 report.] MC

147

EEC dairy facts and figures. [Book]
United Kingdom, Milk Marketing Board, Economics Division
xiii + 136pp. (1975) [En] Price £1.25, £1.75 (foreign) [Thames Ditton, Surrey, UK]

The format and coverage of this report are similar to that of the 1974 report [see preceding abstr.]. The main sections are paginated as follows: EEC prices of dairy products (pp. 16-20), dairy farming (pp. 28-41), milk utilization (pp. 44-49), producer prices for milk, and butter, cheese and retail milk prices in the individual EEC member countries (pp. 52-61), structure of the milk industry (pp. 64-70), liquid milk and fresh milk products market (pp. 72-80), milk products (pp. 82-100), trade in milk and milk products (pp. 102-121), and consumption of liquid milk and milk products (pp. 124-126). MC

148

Instrumentation in industry. [Book]
Soisson, H. E.
xii + 563pp. ISBN 0-471-81049-5 (1975) [many ref. En] New York, USA; John Wiley & Sons, Inc. Price £18.65; $33.35

This book is a broad survey of industrial instrumentation, including a discussion on general principles of operation and brief functional characteristics. It covers the theory, advantages and limitations of the major instruments now used in industry for processing, manufacture, test measurement, and control. Chapters are: How instruments are used in industry [including the food industry] (pp. 1-27); Instrument standards and calibration (pp. 28-58); Pressure and vacuum (pp. 59-108); Thermometers (pp. 109-150); Pyrometry (pp. 151-206); Liquid and dry level instrumentation (pp. 207-239); Flow instrumentation and measurement (pp. 240-289); Automatic measurement and control concepts and systems (pp. 290-322); Analytical industrial instrumentation (pp. 323-403); Radiation measurement and instrumentation (pp. 404-456); Non-destructive testing equipment (pp. 457-501); and Environmental and pollution measurements (pp. 502-553). Most chapters end with review questions, problems and a bibliography. AL

PROCESSES AND EQUIPMENT

149

Food process engineering. [Book]
Heldman, D. R.
xiii + 401pp. ISBN 0-87055-174-4 (1975) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co.; Inc. Price $30 (US) Book $31 (Foreign)

The information presented in this book is intended to provide the engineering student with an opportunity to apply engineering principles in the design of process and system for the food industry. The book is design-oriented, and assumes a background in calculus and differential equations, heat transfer, thermodynamics or physical chemistry, and fluid mechanics. Chapters included are: Introduction (pp.1-24, 12 ref.); Rheology of processed foods (pp.25-85,60 ref.); Heating and cooling processes (pp.86-150, 49 ref.); Thermodynamics of ffreezing (pp. 151-198, 24 ref.); Evaporation for fluid food concentration (pp. 199-236, 17 ref.); Food dehydration (pp. 237-310, 42 ref.); Contact equilibrium processes (pp. 311-356, 7 ref); and Mechanical separation processes (pp. 357-377, 5 ref.). An appendix 'Useful figures and tables' (pp. 378-397) is included. VJG

150

[Properties of refrigerants.] Svoistva kholodil'nykh agentov. [Book]
Badyl'kes, I. S.
173pp. (1974) [numerous ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.62r

The book deals with thermo-physical properties of refrigerants used in compressors and cooling equipment. The following chapters are included: The phase states of refrigerants (pp. 6-27); Thermal properties (pp. 27-65); Calorific properties (pp. 65-108); Physical properties (pp. 108-129); Chemical and toxic properties (pp. 129-137); and The thermodynamic theory of refrigerants (pp. 137-169). STI

151

Commercial food patents, U. S. 1974. [Book]
North, H. B.
280pp. (1975) [En] Arlington, Virginia, USA; Oliver S. North Price $30

This book covers substantially all of the significant US patents issued in 1974 on methods and processes for preparing commercially valuable human food products, human food compositions, apparatus for preparing commercial foods, and apparatus and methods for packaging specific foods. It is designed to provide the food processor and food process equipment supplier with subject-classified, fully-indexed abstracts. Full-page flowsheets or other useful diagrams are included for a number of the patents. The abstracts are classified into the following 21 chapters: Alcoholic beverages (pp. 1-12); Baking and bakery products (pp. 13-36); Breakfast cereals (pp. 37-40); Canning and preserving (pp. 41-48); Cereal grains and flours (pp. 49-56); Coffee and tea (pp. 57-70); Condiments, seasonings, and flavourings (pp. 71-80); Confections (pp. 81-92); Dehydrated foods (pp. 93-96); Fats and oils (pp. 97-104); Fish (pp. 105-112); Freeze-dried and frozen foods (pp. 113-116); Fruits, vegetables, and juices (pp. 117-128); Meat packing and meat products (pp. 129-160); Milk and other dairy products (pp. 161-176); Poultry and egg products (pp. 177-186); Proteins and protein products (pp. 187-200); Shellfish (pp. 201-208); Snacks (pp. 209-214); Sugar (pp. 215-226); and Miscellaneous (pp. 227-236). Assignee, inventor and patent numbers indexes are included. [See FSTA (1975) 7 1G57 for 1973 issue.] VJG

152

[Cooling techniques and technology.]
Kholodil'naya tekhnika i tekhnologiya. [Book]
Anon.
131pp. (1974) [Ru] Kiev, USSR; Tekhnika. Price 1.09 r

The book represents a collection of papers reflecting the results of studies in the fields of cooling equipment utilization, air conditioning, freezing techniques, food products cooling and freezing processes and various industrial applications of cold. STI

153

[Specialization in the canning industries.]
Spetsiyalizatsiya v konservnoi promyshlennosti. [Book]
Vashchenko, A. A.
117pp. (1974) [38 ref. Ru] Kiev, USSR; Tekhnika Price 0.39r

The principal trends in the development of the fruit and vegetable canning industry are presented, with special reference to the specialization of production processes, products manufactured and types of packaging. The book includes the following chapters: Specialization as a basis for further development in the canning industry (pp. 3-21); Specialization in canning plants (pp. 21-69); Specialization in the raw material supply area (pp. 69-77); Agro-industrial associations (pp. 77-89); Specialization and full mechanization of production processes (pp. 89-104); and Improvements in management and profitability (pp. 104-116). STI

154

[Applications of refrigeration. Vol. I. Agriculture and food industries.] Applications frigorifiques. Tome I. Industries agricoles et alimentaires. [Book]
Collin, D.
272pp. (1975) [Fr] Paris, France: Pyc-Edition Price 87F

The 1 st volume of this comprehensive practical guide deals with refrigeration techniques and design of refrigeration plant for the food industry and agriculture. The 1st part of the volume contains general information on the microbiology of cooled or frozen products and on refrigeration of foods and beverages. The 2nd part reviews refrigeration techniques applicable to particular products (animal products, vegetable products, dairy products, beverages; cereals and cereal products; and ice cream, chocolate, confectionery, and sugar). Auxiliary techniques such as use of nitrogen and irradiation are covered in the final part. ADL

155

Microwave heating. [Book]
Copson, D. A.
Ed. 2, xi + 615pp. (1975) [En] Westport, Connecticut, USA; AVI Publishing Co. Inc. Price $38 (USA) $39 (Foreign) [Dep. of Biol., Univ. of Puerto Rico, Mayaguez, Puerto Rico]

This book is intended for the scientific investigator using microwave heating, for the practical professional and for those interested in freeze-drying. Chapters included are: Theory of microwave heating (pp. 1-34, 54 ref.); Microwave freeze-drying - origin of the process (pp. 35-64, 35 ref.); Thermal history of the product in microwave freeze-drying (pp. 65-87, 29 ref.); Derivation of the theory of microwave freeze-drying (pp. 88-116, 23 ref.); Design and development of microwave freeze-driers (pp. 117-139, 9 ref.); Microwave transmission into the freeze-drier (pp. 140-168, 18 ref.); Vapour condensation (pp. 169-192, 16 ref.); Instrumentation and continuous processing (pp. 193-214, 24 ref.); Experimental freeze-drying (pp. 215-234, 41 ref.); Technology of microwave freeze-dried foods (pp. 235-261, 17 ref.); Development and construction of microwave ovens (pp. 262-285, 27 ref.); Materials, accessory devices, and components (pp. 286-321, 15 ref.); Heating and cooking by microwaves (pp. 322-331, 4 ref.); Guide to domestic microwave cooking (pp. 332-359, 47 ref.); Microwave heating and commercial food systems management (pp. 360-375, 1 ref.). [Continued in following abstr.] VJG

156

Microwave heating. [Book]
Copson, D. A.
Ed. 2, xi + 615pp. (1975) [En] Westport, Connecticut, USA; AVI Publishing Co. Inc. Price $38 (USA) $39 (Foreign) [Dep. of Biol., Univ. of Puerto Rico, Mayaguez, Puerto Rico]

[Continued from preceding abstr.] Microwave heating and meal management in various systems (pp. 376-391, 24 ref.); Practical application of microwave heating in the hospital food service system (pp. 392-437, 8 ref.); Nutritional, microbiological, and other experimental aspects (pp. 438-477, 98 ref.); Industrial and commercial microwave heating applications (pp. 478-515, many ref.); Applications engineering (pp. 516-546, many ref.); Radiation biology of microwaves (pp. 547-569, many ref.); and Precautions with microwaves and exposure standard (pp. 570-579). 3 appendices are included: Heating of water - power required for temp. rise/min (p. 580); Microwave heating suppliers of equipment (pp. 581-592); and Reference books, teaching aids, and useful publications for microwave ovens and their use (pp. 593-595). VJG

157

[Fundamental aspects of freeze-drying of foods.]
Aspects fondamentaux de la lyophilisation alimentaire. [Book]
Palanche, B.
231pp. (1973) [many ref. Fr] I, rue Grandville, Boite Postale 576, 54009 Nancy, France; Nutrica

The information in this book is arranged under the following chapter headings: Generalities (pp. 11-22); Technique of freeze-drying (pp. 23-92); Problems during freeze-drying (pp. 93-109); Freeze-drying equipment (pp. 110-135); Methods and controls of freeze-drying (pp. 136-160); Automatic regulation of freeze-drying (pp. 161-164); Determination of the end of freeze-drying (pp. 165-168); Importance of vacuum in freeze-drying (pp. 169-174); The freeze-drying laboratory (pp. 175-178); The freeze-dried product (pp. 179-196); Influence of freeze-drying on the products (pp. 197-209); Cost of freeze-drying (pp. 218-225); and Freeze-drying plant (pp. 226-228). VJG

158

Requirements for the irradiation of food on a commercial scale. Proceedings of a panel on the commercialization of irradiated food items accepted for human consumption and held in Vienna 18-22 March, 1974. [Conference proceedings]
Food & Agriculture Organization, Joint FAO/IAEA Division of Atomic Energy in Food & Agriculture; International Atomic Energy Agency, Joint FAO/IAEA Division of Atomic Energy in Food & Agriculture
STI/PUB/394, 219pp. ISBN 92-0-111275-0 (1975) [many ref. En] Vienna, Austria; International Atomic Energy Agency Price $14, 230sch

Papers, statements and status reports presented at the panel meeting, attended by 16 experts from 13 countries and 7 representatives of international and intergovernmental organizations, include: Public acceptability of food irradiation, by G. Pröpstl (pp. 159-166); Preparations for commercialization of irradiated foods in the Czechoslovak Socialist Republic, by P. Horacek (pp. 175-178); Status of the food irradiation programme in Israel, by M. Lapidot (p. 179); Possibilities and problems of introducing radiation preservation of foodstuffs in Uruguay, by F. G. Merino (pp. 181-182, 2 ref.); Status of potato irradiation in France, by F. Sandret (pp. 183-184); The economic feasibility of onion, potato and wheat irradiation in India, by P. Sudarsan (pp. 197-201); and Consumer attitudes towards food irradiation in the Netherlands, by J. G. van Kooij (p. 203). A summary of the discussions, conclusions and recommendations is included in the book (pp. 207-216). A further 12 papers are abstracted separately and are in the author index under Food & Agriculture Organization [Irradiated Food Symposium]. AL

159

The processing of the International Food Industries Congress, London, May 12th to 16th, 1975.
[Conference proceedings]
Food Trade Review
xx + 309pp. ISBN 0-900379-27-8 (1975) [many ref. En] London, UK; Food Trade Press Ltd. Price £25.00

The main themes of the Congress, sponsored by Food Trade Review, were food quality and processing in the industrialized nations, food standards in the developing countries, agricultural production for the processing industry, and food in the future. Papers presented include: Meat - the changing food pattern, by R. W. Baker (pp. 1-8); Technology and economics of food freezing, by S. Aström (pp. 9-16, 3 ref.); The importance of artificial fertilization in food production, by J. Maroussas (pp. 17-24); Continuous heat exchange in food processing, by N. B. Berry (pp. 25-36); Quality control and hygiene in food manufacture, by E. Telford (pp. 37-43); How the farmer organises to meet manufacturers' requirements, by R. Falk (pp. 55-64); Freezing and chilling techniques for meat, poultry and food, by D. W. Everington (pp. 65-71); Packaging of meat and meat products, by T. E. Davies (pp. 73-84); Dehydration of vegetables and meat products, by P. O'Brolchain (pp. 85-95, 13 ref.); The baking industry, by T. C. Shaw (pp. 97-109); Present and future requirements of pest control [mice] in the food industry, by P. B. Cornwell (pp. 111-122, 10 ref.); Intermediate technology for food utilisation in the developing countries, by J. T. Worgan (pp. 123-147, 33 ref.); Pest control in agricultural crops, by J. R. Cox (pp. 167-175); Hygiene in retail food premises, by H. L. Hughes (pp. 177-184) [Continued in following abstr.]. AL

160

The proceedings of the International Food Industries Congress, London, May 12th to 16th, 1975. [Conference proceedings]
Food Trade Review
xx + 309pp. ISBN 0-900379-27-8 (1975) [many ref. En] London, UK; Food Trade Press Ltd. Price £25.00

[Continued from preceding abstr.] Bulk handling of edible oils, by R. F. Rees (pp. 185-197); Milk processing and manufacture - past, present and future possibilities, by T. R. Ashton (pp. 199-213); The application of new flavour technology to meat, fish and poultry, by R. J. H. Pannell (pp. 215-222); Laminates for the food industry, by G. L. Goodenough (pp. 223-232); The world's oceans as a future source of food, by H. Symons (pp. 233-249); Food for the future, by F. Aylward (pp. 251-257); The manufacture of protein from natural gas via fermentation of methanol, by A. E. Rout (pp. 265-270); and Food standards and their application in a developing country, by M. I. El-Gharbawi (pp. 287-292). Summaries of all papers are given in the appendix (pp. 295-309). A further 3 papers are abstracted separately and are indexed additionally under Food Trade Review [IFIC Symposium]. AL

161

[Principles of food preservation.] Podstawy przechowalnictwa zywnosci. [Book]
Horubala, A.
417pp. (1975) [Pl] Warsaw, Poland; Panstwowe Wydawnictwo Naukowe Price 58zl

The book is intended for those working in the fields of canning, preservation, and storage of foods, giving basic information on microbiological, biochemical, chemical, and physical changes in raw materials, intermediate products and final products. It includes the following chapters: Effects of microorganisms on shelf-life and spoilage of foods (pp. 15-101); Effect of biochemical processes on food quality (pp. 102-156); Biological and biochemical processes occurring in food during storage (pp. 157-183); Effects of chemical processes on food quality (pp. 184-278); Physico-chemical and physico-mechanical processes occurring in foods (pp. 279-315); Storage of fresh food materials of plant origin (pp. 316-354); Storage of fresh materials of animal origin (pp. 355-367); and storage of processed and preserved foods (pp. 368-396). STI

162

[Corrosion in the food industry and its prevention.] Korozja w przemysle spozywczym i jej zapobieganie. [Book]
Awdiejewa, A. W.
243pp. (1975) [Pl] Warsaw, Poland; Wydawnictwa Naukowo-techniczne. Price 40zl

The book is intended for designers, manufacturers and users of food industry equipment; it gives general information on corrosion of metals and metallic alloys in aggressive media, and possibilities of its prevention including use of plastics materials. It includes the following chapters concerning corrosion, protection of material and use of plastics in individual fields of the food and fermentation industries: General knowledge on corrosion of metals and alloys (pp. 9-57); Corrosion in the food industry and corrosion-resistant materials used (pp. 58-158); and Use of plastics materials for design of food industry equipment and protection of its metallic components (pp. 159-210). STI

163

A complete course in canning. [Book]
Lopez, A.
Ed. 10, xiv + 755pp. (1975) [En] Baltimore, Maryland, USA; Canning Trade Price $ [Virginia Polytechnic Inst. & State Univ., Blacksburg, Virginia, USA]

This revised, updated and expanded 10th edition contains the following chapters: Basic information on canning (pp. 11-271); Ingredients (pp. 272-339); Canning of vegetables (pp. 340-457); Canning of fruits (pp. 458-504); Canning of juices and fruit drinks (pp. 505-546); Canning of marine products (pp. 547-572); Canning of dry pack products (pp. 573-598); Canning of meat and poultry products (pp. 599-635); Canning of soups (pp. 636-646); Jellies, jams, and related products (pp. 647-683); Pickles (pp. 684-693); and Mayonnaise and salad dressing products (pp. 694-710). The book is intended to serve as a technical reference book and textbook for all persons interested in or associated with the canning industry. JA

164

Engineering for dairy and food products. [Book]
Farrall, A. W.
xix + 674pp. ISBN 0-88275-135-2 (1973) [many ref. En] Huntington, New York, USA; Robert E. Krieger Publishing Co. Inc. Price $22.75 [Michigan State Univ., East Lansing, Michigan 48823, USA]

This book, a reprint edition with corrections of the original 1963 edition, and intended for students and plant operators, presents information on food processes, materials, methods and equipment. Chapter headings are: Physical and chemical properties of milk and other products; Simple mechanical principles; Power transmission; Electrical power and equipment; Hydraulics and pumping; Heat measurement, transfer, and control; Steam and its use in the dairy; Principles of refrigeration; Insulation and cold-storage rooms; Heaters - coolers, heat-exchange equipment, and milk-storage tanks; Ice-cream freezing equipment; Homogenizers; Pasteurizing equipment; Evaporating and drying equipment; Can washing and sterilizing equipment; Bottle washers, fillers, and cappers; Cream- and butter-handling equipment; Cheese plant equipment; Materials handling fluid milk plant; Food plant automation; Equipment maintenance; and Dairy plant design, construction, materials, and utilization. Reference and revision questions follow each chapter. AL

165

[New methods of food dehydration. Cryoconcentration.] Nove setrne zpusoby dehydrace potravin. Koncentrace vymrazovanim. [Book]
Ibl, V.
43pp. (1974) [17 ref. Cs]

The publication is intended for food technologists, especially in the fields of food industry (e.g. dairy industry, concn. of fruit juices, coffee) where cryoconcentration has the greatest potential application. It includes the following chapters: Basic principles of cryoconcentration and possibilities of using this method in the food industry (pp. 6-15); Industrial equipment for cryoconcentration (pp. 16-31); Economics of cryoconcentration (pp. 32-34); Main fields of application of cryoconcentration for various foods and future trends (pp. 35-36); Present state of use cryoconcentration in Czechoslovakia and recommendations from the viewpoint of Czechoslovak industrial forecasts (pp. 37-39); and Conclusions (p. 40). STI

166

Energy, agriculture and waste management. Proceedings of the 1975 Cornell agricultural waste management conference. [Conference proceedings]
Jewell, W. J. (**United States of America**, Cornell University; **United States of America**, New York State College of Agriculture & Life Sciences; **United States of America**, National Science Foundation) (Editor)
ix + 540pp. ISBN 0-250-40113-4 (1975) [many ref. En] Ann Arbor, Michigan, USA; Ann Arbor Science Publishers Inc. Price $24.75

This book discusses in detail 3 main topics: Energy and food production (pp. 5-139); Energy consumption for controlling wastes (pp. 143-243); and Energy reclamation from agricultural wastes (pp. 247-527). Individual papers within these sections include: Energy consumption in waste water treatment, by R. A. Mills & G. Tchobanoglous (pp. 151-185, 21 ref.); Automated handling of poultry processing wastes, by W. K. Whitehead, R. E. Childs & E. J. Lloyd (pp. 199-210, 6 ref.); and Protein production rates by algae using swine manure as a substrate, by L. Boersma, E. W. R. Barlow, J. R. Miner, H. K. Phinney & J. E. Oldfield (pp. 475-493, 27 ref.). AL

167

[Hydraulic and heat processes in the food industry.] Gidravlicheskie i teplovye protsessy pishchevykh proizvodstv. [Book]
Znamenskii, G. M.
254pp. (1975) [Ru] Moscow, USSR; Pishchevaya promyshlennost'. Price 2.16r

This book, intended for food technologists, includes the following chapters: Calculations in the field of technical hydraulics (including tubing and transport of liquid materials in the alcohol industry, viscosity measurements, and hydro-mechanical properties of massecuites) (pp. 17-134); Theory of industrial filtration (including calculations relating to industrial filtration units, and vacuum filtration of massecuites) (pp. 135-179); Centrifugation of massecuites (including theoretical considerations on industrial centrifugation) (pp. 180-234); and Heat processes (continuous vacuum apparatus, and heat utilization scheme for sugar plant) (pp. 235-256). STI

168

[Filtration using filter aids.] Fil'trovanie s primeneniem vspomogatel'nykh veshchestv. [Book]
Leichkis, I. M.
191pp. (1975) [Ru] Kiev, USSR; Izdatel'stvo Tekhniha Price 0.78r

This book, intended for technicians working in the chemical and food industries, includes the following chapters: General principles of the filtration process (pp. 5-24); Theory of the filtration process using filter aids (pp. 25-65); Methods for evaluation and selection of filter aids (pp. 65-83); Effect of basic technological parameters on the process of filtration using filter aids (pp. 84-111); Optimization of the process of filtration using filter aids (pp. 112-128); Filtration diaphragms (pp. 129-141); and schemes and equipment of industrial filtration units (pp. 142-182).

169

[Protection of ferroconcrete structures in the canning industry against corrosion.] Zashchita ot korrozii zhelezobetonnykh konstruktsii konservnykh zavodov. [Book]
Lisitsyn, Yu. V.; Minas, A. I.; Kaverzin, V. P.; Litvinova, V. A.
125pp. (1975) [Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 0.45r

The publication deals with the results of research carried out in the Research Laboratory for Plastics of the Rostov Institute of Building Research, concerning use of polymer concretes, cement-polymer solutions and polymer coatings of concrete. It includes the following chapters: Specific conditions in the canning industry plants (pp. 5-21); Corrosion of concrete and steel equipment caused by canning industry products and methods for its prevention (pp. 22-54); Polymer concrete and their resistance to canning industry products (pp. 55-73); Cement-polymer concretes and solutions and their resistance to canning industry products (pp. 74-87); Plastics film coatings (pp. 88-97); Technology of application of protective coatings (pp. 98-111); and Technical means for preparation and application of plastics-containing coatings (pp. 112-117). STI

170

[Technology and technological control of canning.] Tekhnologiya i tekhnologicheskii kontrol' konservirovaniya. [Book]
Il'chenko, S. G.; Markh, A. T.; Fan-Yung, A. F.
422pp. (1974) [Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 1.05r

This book, intended for students of food technology and technicians working in the canning industry, includes the following chapters: Principles of canning (pp. 8-64); Canning of fruit and vegetables (pp. 65-217); Drying of vegetables and fruit (pp. 218-247); Canning of meat (pp. 248-274); Mathematical calculations (pp. 275-279); General methods of sampling and analysis (pp. 280-373); and Special methods of evaluation and analysis and organization of technological control (pp. 374-414). STI

171

Disinfection. Water and wastewater. [Book]
Johnson, J. D. (Editor)
vi + 425pp. ISBN 0-250-40042-1 (1975) [many ref. En] Ann Arbor, Michigan, USA; Ann Arbor Science Publishers Inc. Price $30.30; £17.85 [Dep. of Environmental Sci. & Eng., School of Public Health, Univ. of N. Carolina, Chapel Hill, N. Carolina, USA]

This book examines various aspects of the disinfection of drinking, swimming and waste water with bromine, iodine, ozone and chlorine. It contains the following chapters: Aspects of the quantitative assessment of germicidal efficiency, by J. C. Morris (pp. 1-10, 5 ref.); A multi-Poisson distribution model for treating disinfection data, by J. H. Wei & S. L. Chang (pp. 11-47, 20 ref.); Recycle - what disinfectant for safe water then?, by M. A. McClanahan (pp. 49-66, 35 ref.); Water disinfection - chemical aspects and analytical control, by A. T. Palin (pp. 67-89, 27 ref.); Selection of a field method for free available chlorine, by C. Sorber, W. Cooper & E. Meier (pp. 91-112, 20 ref.); Interhalogens and halogen mixture as disinfectants, by J. F. Mills (pp. 113-143, 117 ref.); The comparative mode of action of chlorine, bromine, and iodine on f_2 bacterial virus, by V. P. Olivieri, C. W. Kruse, Y. C. Hsu, A. C. Griffiths & K. Kawata (pp. 145-162, 27 ref.); Bromine disinfection of wastewater effluents, by F. W. Sollo, H. F. Mueller, T. E. Larson & J. D. Johnson (pp. 163-177, 13 ref.); Bromine disinfection of wastewater, by J. D. Johnson & W. Sun (pp. 179-191, 19 ref.); [Continued in following abstr.]. JA

172

Sisinfection. Water and wastewater. [Book]
Johnson, J. D. (Editor)
vi + 425pp. ISBN 0-250-40042-1 (1975) [many ref. En] Ann Arbor, Michigan, USA; Ann Arbor Science Publishers Inc. Price $30.30; £17.85 [Dep. of Environmental Sci. & Eng., School of Public Health, Univ. of N. Carolina, Chapel Hill, N. Carolina, USA]

[Continued from preceding abstr.] Comparison of bromine, chlorine and iodine as disinfectants for amoebic cysts, by R. P. Stringer, W. N. Cramer & C. W. Kruse (pp. 193-209, 33 ref.); Disinfection of water and wastewater using ozone, by E. W. J. Diaper (pp. 211-231, 15 ref.); Economical wastewater disinfection with ozone, by H. M. Rosen, F. E. Lowther & R. G. Clark (pp. 233-248, 22 ref.); Chlorine and oxychlorine species reactivity with organic substances, by D. H. Rosenblatt (pp. 249-276, 68 ref.); The chemistry of aqueous nitrogen trichloride, by J. L. S. Saguinsin & J. C. Morris (pp. 277-299, 26 ref.); Kinetics of tribromamine decomposition, by T. F. LaPointe, G. Inman & J. D. Johnson (pp. 301-338, 28 ref.); Dechlorination by activated carbon and other reducing agents, by V. L. Snoeyink & M. T. Suidan (pp. 339-358, 32 ref.); Comparative inactivation of bacteria and viruses in tertiary-treated wastewater by chlorination, by P. P. Ludovici, R. A. Phillips & W. S. Jeter (pp. 359-390, 69 ref.); and Disinfection of wastewater effluents for virus inactivation, by J. T. Cookson, Jr. & C. M. Robson (pp. 391-417, 36 ref.). JA

PACKAGING

173

Plastic films and packaging. [Book]
Oswin, C. R.
xi + 214pp. ISBN 0-85344-641-0 (1975) [many ref. En] Barking, Essex, UK; Applied Science Publishers Ltd. Price £8.00

This essentially practical book contains the following chapters: Structure and properties of polymers (pp. 1-28, 39 ref.); Polyolefin films (pp. 29-57, 29 ref.); Substituted olefins (pp. 58-82, 19 ref.); Polyethers (pp. 83-107, 20 ref.); Saturated polyesters and polyamides (pp. 108-122, 10 ref.); Materials and mechanisms (pp. 123-145, 27 ref.); Selection of films for packaging uses, in relation to mechanical, climatic, and biological hazards, the market situation for packaging milk and biscuits and a summary of packaging practices for various foodstuffs (pp. 146-165, 18 ref.); Selection of films for non-packaging uses (pp. 166-183, 28 ref.); and Costs and benefits of packaging, e.g. for milk, snacks, biscuits and canned foods (pp. 184-208, 26 ref). AL

NEW AND CONVENIENCE FOODS

174

Freezer facts. [Book]
Leach, M.
vi + 190pp. ISBN 0-901762-20-2 (1975) [37 ref. En] London, UK; Forbes Publications Ltd. Price £4.75

The intention of this book is to give priority to the theoretical aspect in sufficient depth to meet the needs of those educationally interested in the subject, and to link this with an outline of the practical application and method. Chapters included are: Historical background, by M. Leach (pp. 1-5); Refrigeration and the home freezer, by

A. A. Ryan (pp. 6-29); Physical and structural changes which occur during the freezing and storage of aqueous solutions and foods, by M. A. Hudson (pp. 30-50); Chemical changes occurring in frozen foods, by C. Shaw (pp. 51-65); Nutritional value of frozen food, by C. Leuillette (pp. 66-70); Food microorganisms at low temperatures, by R. R. Davenport (pp. 71-85); Economics of the home freezer, by A. J. Abbott (pp. 88-98); The range and suitability of wraps, by M. Jones (pp. 99-105); Practical aspects, by M. Leach (pp. 106-115); Food freezing methods, by M. Leach (pp. 116-149); and Freezing within the school meals service, by J. Millross (pp. 150-180). VJG

175

Fabricated foods. [Book]
Inglett, G. E. (Editor)
vii+215pp. ISBN 0-87055-179-5 (1975) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co. Inc. Price $20 (US), $21 (Foreign) [N. Regional Res. Lab., USDA, Peoria, Illinois, USA]

This book is comprised of selected papers from a Short Course on Fabricated Foods sponsored by the Agricultural and Food Chemistry Division of the American Chemical Society, held in Las Vegas, Nevada, on March 27-29, 1974. Chapters in the book are: Fabricated foods in perspective, by G. E. Inglett (pp. 1-6, 4 ref.); Fabricated foods in our economy, by K. Bird (pp. 7-12); Government regulations affecting fabricated foods, by O. C. Johnson (pp. 13-17); Strategic consideration behind fabricated foods development, by J. L. Holahan (pp. 18-22, 2 ref.); Marketing of fabricated foods, by N. R. Lockmiller (pp. 23-31, 9 ref.); Physical-chemical principles of food fabrication, by F. Franks (pp. 32-48, 18 ref.); Soy proteins for fabricated foods, by W. J. Wolf (pp. 49-67, 47 ref.); Carbohydrates for fabricated foods, by M. Glicksman (pp. 68-88, 38 ref.); Textures by extrusion processing, by O. B. Smith (pp. 89-108, 15 ref.); Sensory analysis: theory, methodology, and evaluation, by J. Sidel, A. Woolsey & H. Stone (pp. 109-126, 15 ref.); Texture properties and evaluations of fabricated foods, by M. C. Bourne (pp. 127-158, 42 ref.); Flavouring fabricated foods, by S. Kuramoto & I. Katz (pp. 159-169, 49 ref.); Nutritional aspects of fabricated foods, by G. M. Briggs (pp. 170-185, 11 ref.); Nutritional evaluation of fabricated foods, by C. Kies (pp. 186-195, 7 ref.); Protein considerations for fabricated foods, by D. Rosenfield (pp. 196-206, 7 ref.), and Vitamin and mineral fortification, by B. Borenstein (pp. 207-212, 8 ref.). JA

176

A manual of methods for the bacteriological examination of frozen foods. [Book]
Hall, L. P.
Ed. 2, 85pp. (1975) [31 ref. En] Chipping Campden, Gloucestershire, UK; Campden Food Preservation Research Association Price £5.35

This revised and updated 2nd edition gives, like the 1st published in 1968 [see FSTA (1969) 1 4B158] a scheme of analysis for assessing the bacteriological quality of frozen foods. All methods given have been approved and accepted by the UK Association Frozen Food Producers. It is anticipated that this manual will be revised and updated at regular (approx. 3-5 yr) intervals. Chapters are: Scheme for the bacteriological examination of frozen foods (pp. 11-37), which covers sampling, sample preparation, dilution and methods for counting and detection; Significance of results (pp. 38-47); and Media, solutions and stains required for analyses (pp. 48-83), which details the preparation and composition of 33 such items and gives a MPN table. JA

177

Food from waste. [Conference proceedings]
Birch, G. G.; Parker, K. J.; Worgan, J. T. (United Kingdom, University of Reading) (Editors)
xii + 301pp. ISBN 0-85334-659-3 (1976) [many ref. En] Barking, Essex, UK; Applied Science Publishers Ltd. Price £16

Papers presented at an industry-university cooperation symposium, held at the National College of Food Technology, University of Reading, include: Food from waste in the present world situation, by E. J. Rolfe (pp. 1-7, 6 ref.); Food from waste: an overview, by S. R. Tannenbaum & G. W. Pace (pp. 8-22, 5 ref.); Wastes from crop plants as raw materials for conversion by fungi to food or livestock feed, by J. T. Worgan (pp. 23-41, 32 ref.); Yeast from molasses, by G. Sobkowicz (pp. 42-57, 87 ref.); The upgrading of agricultural wastes by thermophilic fungi, by K. J. Seal & H. O. W. Eggins (pp. 58-78, 33 ref.); Production of microbial protein from carbohydrate wastes in developing countries, by F. K. E. Imrie & R. C. Righelato (pp. 79-97, 10 ref.); Microbial production of oils and fats, by C. Ratledge (pp. 98-113, 33 ref.); Algal proteins, by G. Priestley (pp. 114-138, 66 ref.); Food from waste paper, by D. E. Brown & S. W. Fitzpatrick (pp. 139-155, 49 ref.); Cultivation of a thermotolerant basidiomycete on various carbohydrates, by B. von Hofsten (pp. 156-166, 11 ref.) [Continued in following abstr.] VJG

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Food from waste. [Conference proceedings]
Birch, G. G.; Parker, K. J.; Worgan, J. T. (United Kingdom, University of Reading) (Editors)
xii + 301pp. ISBN 0-85334-659-3 (1976) [many ref. En] Barking, Essex, UK; Applied Science Publishers Ltd. Price £16

[Continued from preceding abstr.] Food from waste: leaf protein, by N. W. Pirie (pp. 180-195, 47 ref.); Protein from potato starch mill effluent, by B. J. Oosten (pp. 196-204, 4 ref.); The world food problem, by G. D. Kapsiotis (pp. 232-241); Nutritional and toxicological evaluation of novel feed, by P. van der Wal (pp. 256-263); The socio-economic implications of producing food from

wastes, by L. G. Plaskett (pp. 264-277); and The bioplex concept, by C. F. Forster & J. C. Jones (pp. 278-289, 22 ref.). A further 4 papers are abstracted separately and are in the author index under **United Kingdom**, University of Reading [Food Waste Symposium]. VJG

179

Snack food technology. [Book]
Matz, S. A.
vii + 349pp. ISBN 0-87055-193-0 (1976) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co. Inc. Price $29 (USA) $30 (Foreign) [Ovaltine Products Div., Sandoz Inc., Villa Park, Illinois, USA]

This book attempts to fill the need for a technological guide in the field of snack foods. It contains the following 4 sections, each containing several chapters: Snack food ingredients (pp. 1-99); Products and processes (pp. 100-178); Equipment (pp. 179-288); and Technical functions (pp. 289-342). Individual chapters are: Popcorn and other cereal products (pp. 1-13, 17 ref.); Fats, oils, emulsifiers, and antioxidants (pp. 14-28, 21 ref.); Sweeteners (pp. 29-41, 25 ref.); Cheese and other dairy products (pp. 42-49, 11 ref.); Salt (pp. 50-62, 13 ref.); Water (pp. 63-70, 16 ref.); Nuts (pp. 71-81, 20 ref.); Potatoes and other plant products (pp. 82-87, 23 ref.); Flavors and colors (pp. 88-99, 14 ref.); Potato chips (pp. 100-108, 23 ref.); Meat-based snacks (pp. 109-115, 7 ref.); Snacks based on popcorn (pp. 116-128, 18 ref.); Puffed snacks (pp. 129-143, 47 ref.); Corn chips and simulated potato chips (pp. 144-149, 10 ref.); Baked snacks (pp. 150-170, 11 ref.); Nut-based snacks (pp. 171-178, 12 ref.). [Continued in following abstr.] JA

180

Snack food technology. [Book]
Matz, S. A.
vii + 349pp. ISBN 0-87055-193-0 (1976) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co. Inc. Price $29 (USA), $30 (Foreign) [Ovaltine Products Div., Sandoz Inc., Villa Park, Illinois, USA]

[Continued from preceding abstr.] Extruding equipment (pp. 179-196, 12 ref.); Equipment for frying, baking, and drying (pp. 197-213, 13 ref.); Specialized equipment for popcorn processing (pp. 214-224, 3 ref.); Specialized equipment for potato chip processing (pp. 225-232, 12 ref.); Packaging materials (pp. 233-248, 16 ref.); Packaging equipment (pp. 249-262, 9 ref.); Miscellaneous equipment (pp. 263-288, 12 ref.); Product development (pp. 289-316, 49 ref.); Quality control (pp. 317-333, 30 ref.); and Nutritional supplementation (pp. 334-342, 16 ref.). JA

BEVERAGES – WINE, SPIRITS, TEA, COFFEE, WATER

181

[The big book on wine.] Velka kniha o vine. [Book]
Matuska, P.
120pp. (1974) [43 ref. Sk] Bratislava, Czechoslovakia; Priroda. Price 25Kcs

This publication for all who love wine cover the following topics: History of viniculture; viniculture in Slovakia; history of grape harvesting; history of grape processing and a short review of present methods for processing grapes into wine; wine tasting; how to drink and enjoy wine; selection of wine varieties and serving of wine; defects of wine; cooking with wine; wine beverages; and medical aspects. A small dictionary is included. The text is profusely illustrated. STI

182

[Technological equipment in plants producing fruit wine.] Tekhnologicheskoe oborudovanie zavodov plodoyagodnykh vin. [Book]
Zaichik, Ts. R.; Pisarnitskii, A. F.
116pp. (1974) [17 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.32r

The book is designed particularly for plant operatives, and therefore the main attention is paid to the care and operation of the equipment. The following chapters are included: Lay-out and classification of equipment used in the manufacture of fruit wines (pp. 7-16); Equipment used for processing fruit and berries (pp. 16-72); Fermentation equipment and carbonation machinery (pp. 72-82); Fruit wine processing equipment (pp. 82-95); and Fruit wine filling machines and equipment (pp. 95-117). STI

183

[Production of apple beverages and wines with low alcohol content.] Proizvodstvo slaboalkogol'nykh yablochnykh napitkov i vin. [Book]
Vecher, A. S.; Yurchenko, L. A.
101pp. (1974) [34 ref. Ru] Minsk, USSR; Nauka i tekhnika. Price 0.43r

This book, of particular interest to all engaged in fruit wine production and in economical apple utilization, contains the following chapters: Economic importance of apples (pp. 3-13); Juice production (pp. 13-17); Juice preservation methods (pp. 17-30); Fermented apple juices (pp. 30-40); Manufacture of fermented natural apple juices, sparkling wines and ciders in the USSR and abroad (pp. 40-47); Biochemical processes taking place during the production and storage of fermented juice (pp. 47-56); Sparkling apple wines (pp. 56-81); and Keeping quality of sparkling apple wine during storage (pp. 95-101). STI

184

Chemistry of winemaking. [Conference proceedings]
Webb, A. D. (**United States of America**, American Chemical Society) (Editor)
Advances in Chemistry Series **137**, viii + 311pp. ISBN 0-8412-0208-7 (1974) [many ref. En]

This symposium on the chemistry of winemaking, sponsored by the Division of Agricultural and Food Chemistry at the 165th Meeting of the American Chemical Society, in Dallas, Texas on April 12-13, 1973, contains 13 papers. These are abstracted separately and are in the author index under **United States of America**, American Chemical Society [Symposium]. The book is well indexed. AL

185

[6th International Colloquium on the Chemistry of Coffee, Bogota, 4-9 June, 1973.] Sixieme Colloque International sur la Chimie des Cafes Verts, Torrefies et leurs Derives, Bogota, 4-9 Juin 1973. [Conference proceedings]
Quijano Rico, M. (Association Scientifique Internationale du Cafe [ASIC]) (Editor)
358pp. (1974) [many ref. Fr, En, Es, De] 75017, Paris, France

Papers presented at the ASIC International Colloquium on Coffee Chemistry, held in Bogota on 4-9 June, 1973, included: Recent reports on the chemistry and technology of coffee: a review, by R. F. Smith (pp. 18-27, 220 ref., En, fr, es, de); Ten years ASIC work on the chemistry of coffee: results and hopes, by P. Navellier & F. Chassevent (pp. 28-33, 63 ref., Fr, es, en, de); Progress in agronomical research in coffee growing; future views, by R. Coste (pp. 34-40, Fr, es, en, de); Combined gas chromatography-high resolution mass spectrometry for identification and structure elucidation of organic compounds in natural product research, by J. Roboz (pp. 81-88, 11 ref., En, fr, es, de); Production of fungi imperfecti from waste waters from coffee fruit processing plants, by C. Rolz, H. Mayorga, S. Schneider, L. Cordero, J. F. Menchu & R. Espinosa (pp. 260-265, 270, 267, 15 ref., Es, fr, en, de); and Opinions about coffee among doctors and laymen in Eastern Switzerland, by S. Heyden & M. Escher (pp. 304-307, En). A further 33 papers are abstracted separately and are in FSTA in the author index under ASIC [Symposium]. [See FSTA (1973) 5 9H1391, 9H1392, 9H1393, 9H1394 and 9H1395 for the 5th Colloquium.] AL

186

[Equipment for plants producing sparkling wine.] Oborudovanie zavodov shampanskikh vin. [Book]
Gagarin, M. A.
125pp. (1974) [13 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost. Price 0.31r

Processing equipment and machinery for the production of sparkling wine is described, starting with bottles handling equipment prior to bottle washing and ending with closure of the full bottles, and subsequent storage. The following chapters are included: continuous production of Soviet sparkling wine and equipment used; storage tanks and raw material processing equipment; bottle washing and filling equipment; storage and quality control; and final treatment of sparkling wine. STI

187

[Development trends in the market for beverages in Europe.] Tendenze evolutive del mercato delle bevande in Europa. [Book]
Italy, Istituto per le Ricerche e le Informazioni di Mercato e la Valorizzazione della Produzione Agricola
210pp. (1973) [It] Rome, Italy

Data are given on all types of beverages, alcoholic and non-alcoholic, available to the European consumer, including mineral waters, carbonated beverages based on fruit juice or cola, fruit juices, beer, wine, cider, fortified wines, milk, tea and coffee. The material is divided into 3 chapters: the 1st covers primarily consumption of the various types of beverage in the 24 countries studied; the second analyses factors which influence beverage consumption; and the 3rd forecasts consumption trends up to 1980. HBr

188

Coffee solubilization. Commercial processes and techniques. [Book]
Pintauro, N. D.
Food Technology Review, Noyes Data Corporation No. 28, xii + 256pp. ISBN 0-8155-0598-1 (1975) [En] Park Ridge, New Jersey, USA; Noyes Data Corporation Price $36

This book is based on US patents that deal with commercial processes and techniques for producing instant, soluble coffee. Information is arranged under the following headings: Roasting (pp. 3-34); Extraction (pp. 35-64); Special extraction, filtration and concentration (pp. 65-84); Recovery of aromatic volatiles (pp. 85-109); Dehydration processes (pp. 110-125); Freeze-drying processes (pp. 126-155); Aromatization of soluble coffee powder (pp. 156-176); Agglomeration techniques (pp. 177-209); Decaffeinated soluble coffee (pp. 210-231); and Packaging, special products and processes (pp. 232-247). Company, inventor and patent number indexes are included. VJG

189

[Aroma changes in orange juice.] Aromaveränderungen von Orangensaft. [Book]
Bielig, H.-J.; Askar, A.; Treptow, H.
Fortschritte in der Lebensmittelwissenschaft No. 1 v + 96pp. ISBN 3-7983-0201-4 (1974) [141 ref. De] Berlin; Universitätsbibliothek der Tech. Univ Price DM8.50 [Inst. für Lebensmitteltech., Tech. Univ., Berlin (West)]

This first publication in a new series, 'Fortschritte in der Lebensmittelwissenschaft', covers aspects relating to changes in orange juice

aroma during manufacture and storage. Chapters are: Introduction (pp. 1-11), which discusses cultivation, production and trade statistics of oranges and orange juice, orange varieties, and manufacture of orange juice; The present state of research (pp. 11-53), which discusses the composition of orange juice, aroma compounds in orange juice, biochemistry of aroma formation, chemistry of aroma changes, and improvement of aroma by adding enzymes; Actual experimental work (pp. 53-58); Results of experimental work and discussion (pp. 59-78); and Measures to prevent changes in aroma (pp. 79-81). JA

190

Encyclopedia of wines and spirits. [Book]
Lichine, A.; Fifield, W.
xii + 716pp. ISBN 0-304-29511-6 (1975) [many ref. En] London, UK; Casell & Co. Ltd. Price £12.50

This revised, updated and enlarged edition of this encyclopaedia of wines and spirits includes a comprehensive alphabetical listing with definitions, descriptions and explanations of numerous winemaking terms, winemaking regions, wines, spirits, etc. In addition, brief sections on the vine, the history of wines and spirits, wine and food, serving wine, starting a cellar, value and wine, wine and health, and winemaking and diatillation are given, together with appendices covering Bordeaux and German wines, containers and measures, comparative strengths of spirits, vintage charts, a pronunciation glossary, and metric/imperial measure conversion tables. A 3-page bibliography and a 36-page subject index are given. AJDW

191

[Technology of continuous processes in wine-making.] Tekhnologiya potochnoi obrabotki vinomaterialov. [Book]
Union of Soviet Socialist Republics, Vsesoyuznyi Nauchno-issled. Institut Vinodeliya i Vinogradarstva "Magarach"
175pp. (1974) [Ru] Simferopol', USSR; Izdatel'stvo "Tavriya" Price 1.13r

This book, intended for food scientists and technologists working in the wine industry, includes the following chapters giving summaries of long-term research conducted by the Soviet wine industry: Technology of continuous processes for accelerated maturing and processing of wine materials (pp. 5-8); Continuous systems for maturing wine materials (pp. 9-25); Continuous processing of wine materials (pp. 26-55); Model experiments and selection of conditions for accelerated maturing and processing of wine materials (pp. 56-68); Materials for construction of continuous lines (pp. 69-86); Equipment and systems for continuous lines (pp. 87-141); and Automation of continuous lines for accelerated ripening and processing of wine materials (pp. 142-170). STI

192

[Operational and quality control in breweries and in the non-alcoholic beverage industry.] Betriebs- und Qualitätskontrolle in Brauerei und alkoholfreier Getränkeindustrie. [Book]
Krüger, E.; Bielig, H. J.
393pp. ISBN 3-489-64614-2 (1976) [many ref. De] Hamburg, Federal Republic of Germany; Verlag Paul Parey Price DM98 [Tech. Univ., Berlin (West)]

This detailed textbook on analysis of beer, soft drinks and raw materials contains the following chapters: General analytical methods (pp. 13-50); Statistical methods for evaluation of analytical results (pp. 50-77); Water analysis (pp. 78-114); Barley analysis (pp. 114-133); Malt analysis (pp. 133-163); Hop analysis (pp. 164-183); Studies for process control (pp. 184-199); Wort analysis (p. 199); Beer analysis (pp. 199-276); Analysis of raw materials for non-alcoholic beverages (pp. 277-284); and Analysis of non-alcoholic beverages (pp. 284-389). A 4-page subject index is included. AJDW

193

The design and development of the TPI Produce Inspection Sieve.
Golob, P.; Nichols, W.
Report, Tropical Products Institute L42, iv + 10pp. ISBN 0-85954-039-1 (1975) [En, fr, es] Price £0.30 [Tropical Products Inst., 56/62 Gray's Inn Road, London WC1X 8LU, UK]

The sieve, developed, designed and constructed by the Tropical Products Institute, was used successfully for recovery of dust and insects from coffee beans in sacks. Optimum conditions for the operation of the sieve included a gap of 1.5 cm between the commodity hopper and the sieve mesh and a cranking rate of 70 rev/min; an average 60 kg sack was sieved in 2 min 20 s. With coffee beans a sieve of 0.1 in (2.54 mm) aperture could be successfully used for all types of beans but would be less successful in recovery of last instar Ephestia cautella larvae. This is not considered of any consequence for commercial applications. The tests described provide an assessment of the capacity of the sieve for inspecting coffee beans. It is probable that it would perform equally well with other commodities. AS

194

Alcoholic beverage processes. [Book]
Gutcho, M. H.
Food Technology Review, Noyes Data Corporation No. 29, xii + 355pp. ISBN 0-8155-0603-1 (1976) [En] Park Ridge, New Jersey, USA; Noyes Data Corp. Price $39

This book is based on US patents issued since the early 1960's that deal with commercial methods and techniques for making alcoholic beverages. It is divided into 3 parts: Malt beverages (pp. 3-262); Wines and distilled spirits (pp. 264-332); and Unusual forms and applications (pp. 334-347).

Chapters are: Malting (pp. 4-25); Wort (pp. 26-76); Hops (pp. 77-128); Fermentation (pp. 129-172); Freeze-concentration and reconstitution (pp. 173-188); Chillproofing (pp. 189-223); Preservation against microbial spoilage (pp. 224-237); Foam (pp. 238-245); Special procedures and products (pp. 246 262); Wines (pp. 264-303); Distilled spirits (pp. 304-332); Dry and gelated beverage compositions (pp. 334-341); and Extraction of flavour components (pp. 342-347). Company, inventor and US patent number indexes are included. VJG

195

[Production of beverages from fruit.] Vyroba napoju z ovoce. [Book]
Uher, J.; Dyr, J.; Horcicka, M.; Uhrova, H.
336pp. (1975) [Cs] Prague, Czechoslovakia; SNTL. Price 25Kcs

This book, intended for students of food technology and those working in the beverage industry, includes the following chapters: Fruit and its chemical composition (pp. 12-23); Production of non-fermented fruit juices and ciders (pp. 24-137); Fruit syrups (pp. 138-144); Fruit wines (pp. 145-186); Production of fruit distillates (pp. 187-258); Production of fruit-based alcoholic beverages (pp. 259-302); Organoleptic evaluation of beverage quality (pp. 303-308); and Hygiene and sanitation in the beverage industry (pp. 309-331). STI

196

Monograph-I. E.B.C. Wortsymposium, Zeist - November 1974. [Conference proceedings]
European Brewery Convention
383pp. ISBN 90-9000021-6 (Undated) [many ref. En, Fr, De] Rotterdam, Netherlands Price f50

The aim of this symposium was to present information relating to the wort composition of beers currently being marketed. The 21 papers present results (including extensive tabulated data) obtained from the literature and, in some cases, from the authors' own work. Discussions are included at the end of each paper. Papers are: Wort composition, a survey, by W. J. Klopper (pp. 8-24, 50 ref., En); Nitrogenous components in wort, by S. Lie, A. D. Haukeli & T. Jacobsen (pp. 25-40, 42 ref., En); Nitrogenous composition of worts destined for bottom fermentation, by M. Moll, R. Flayeux, V. That & J. Martin (pp. 41-72, 39 ref., Fr, En); Amino acids, peptides and proteins, by T.-M. Enari (pp. 73-89, 19 ref., En); Amino acid composition of wort, by M. Jones (pp. 90-105, 18 ref., En); Proteins and peptides in top fermentation worts, by J. R. Hudson (pp. 106-112, 22 ref., En); Carbohydrates in all-malt worts - fermentable sugars, by H. Kieninger & W. Röttger (pp. 113-134, 21 ref., De, En); Dextrins, beta-glucans and pentosans in all-malt worts, by F. Schur, H. Hug & H. Pfenninger (pp. 135-157, 59 ref., De, En); Dextrins in brewing - a review, by B. S. Enevoldsen (pp. 158-188, 19 ref., En); Fermentable sugars in wort, brewed with adjuncts and fermented with bottom-yeast, by S. F. Hoekstra (pp. 189-197, 28 ref., En); Complex polysaccharides in top fermenting worts, by G. N. Bathgate (pp. 198-207, 35 ref., En); [continued in following abstr.]. JA

197

Monograph-I. E.B.C. Wortsymposium, Zeist - November 1974. [Conference proceedings]
European Brewery Convention
383pp. ISBN 90-9000021-6 (Undated) [many ref. En, Fr, De] Rotterdam, Netherlands Price f50

[Continued from preceding abstr.] Fermentable sugars and dextrins in top fermentation wort, by L. Taylor (pp. 208-225, 13 ref., En); Mineral matter, trace elements, organic and inorganic acids in hopped wort, by B. Mändl (pp. 226-238, 42 ref., De, En); Wort salts in beers brewed using adjuncts, by A. D. Rudin (pp. 239-257, 44 ref., En); Importance of wort lipids for beer quality and possibilities of varying them quantitatively, by M. Forch & U.-D. Runkel (pp. 258-277, 33 ref., De, En); Lipids in wort brewed with adjuncts for bottom fermentation, by T. Äyräpää (pp. 278-284, 28 ref., En); The lipids of top fermentation worts, b by C. C. Thompson (pp. 285-293, 18 ref., En); Reducing substances of wort - oxidation phenomena, by L. Chapon & C. Louis (pp. 294-312, 22 ref., Fr, En); Polyphenols and anthocyanogens in bottom fermentation worts, by R. Vancraenenbroeck (pp. 313-331, 33 ref., Fr, En); Tannins, anthocyanogens and melanoidins in top fermentation worts, by R. W. Ricketts (pp. 332-338, 12 ref., En); and Malt, by A. Macey (pp. 339-353, En). The most important conclusions of the various papers are presented in 3 summaries: All-malt worts, by H. Kieninger (pp. 354-363, De, En); Adjunct worts - top fermentation, by J. R. Hudson (pp. 364-371, En); and Worts brewed with adjuncts and bottom-fermented, by S. F. Hoekstra (pp. 372-375, En). The symposium concludes with final comments, by L. Narziss (pp. 376-383, De, En). JA

198

[Recommendations on the technology and techno-chemical control of winery wastes processing.] Rekomendatsii po tekhnologii i tekhnokhimicheskomu kontrolyu kompleksnoi pererabotki otkhodov vinodelyia. [Book]
Razuvaev, N. I.; Nechaev, P. F.
64pp. (1974) [Ru] Simferopol', USSR; Izdatel'stvo "Tavriya". Price 0.30r

The following chapters are included: Sugar (alcohol) extraction and extraction of tartaric acid compounds from husks of grapes (pp. 6-9); Production of crude alcohol (pp. 11-14); Production of edible grape colouring matter extract (pp. 17-21); Crude alcohol production (pp. 22-23); Production of dried wine yeast (pp. 27-28); Crude alcohol (p. 34); Edible colourings (pp. 35-36); Sanitation of buildings and equipment (p. 36); Raw juice (pp. 41-42); and Methods for analysis of edible grape colouring matter (pp. 54-59). The book is based on investigations carried out by Soviet research institutes and on experience gained by Soviet wineries. STI

199

Beer deposits. A laboratory guide and pictorial atlas for the study of the various particles found in the deposits of beer and ale. [Book]
Glenister, P. R.
114pp. (1975) [72 ref. En] Chicago, Illinois, USA; Miles Laboratories Inc. Price $25 [J. E. Siebel Sons' Co., Marschall Div., Miles Lab. Inc., Chicago, Illinois, USA]

The purpose of this book is to provide brewing chemists with a laboratory guide for the microscopic examination of the particulate matter present in beer deposits. Chapters are: Introduction (pp. 5-6); Particle classification (p. 7); Particles in beer deposits as clues to processing problems (pp. 9 15); Methods for deposit examination (pp. 17-31); Microchemical tests applicable to beer deposits (pp. 33-36); Infrared spectroscopy as an aid in the identification of gummy carbohydrate components of beer deposits (pp. 37-40); Particle trapping techniques (pp. 41-45); Selecting a microscope for the brewery laboratory (p. 47); and An atlas of beer deposit particles (pp. 49-112), this last chapter consisting of a comprehensive collection of photomicrographs of particles in beer deposits.
JA

200

[Problems of the Biochemistry of Grapes and Wine. Proceedings of the 2nd Conference on the Biochemistry of Grapes and Wine, 1973.] Voprosy biokhimii vinograda i vina. Trudy vtoroi vsesoyuznoi konferentsii po biokhimii vinodeliya i vino, 1973. [Conference proceedings]
Union of Soviet Socialist Republics, Institut Biokhimii imeni A. N. Bakha; **Union of Soviet Socialist Republics**, Vsesoyuznyi Nauchno-issledovatel'skii Institut Vinodeliya i Vinogradarstva "Magarach"
428pp. (1975) [many ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost Price 2.58r

Papers read at the conference included: Peptides in the vegetative parts of the vine and in grapes and ways in which they are formed, by O. T. Khachidze (pp. 118-122); Effect of CO_2 excess pressure on the growth and metabolism of wine yeasts, by N. I. Buryan (pp. 203-210, 13 ref.); The ethanol/acetaldehyde cycle of wine yeasts, by A. A. Martakov (pp. 211-220, 19 ref.); The effect of nitrogen sources on the formation of organic acids by various kinds of yeast organisms during alcoholic fermentation, by T. S. Lomkatsi (pp. 220-223, 7 ref.); Higher alcohols and volatile fatty acids formed by various types of yeasts during must fermentation, by N. I. Buryan, O. V. Razuvaeva, N. M. Pavlenko & A. N. Patrushev (pp. 223-226, 3 ref.); Formation of diacetyl and acetoin by lactic acid bacteria isolated from wine, by Z. D. Rabinovich (pp. 226-231, 7 ref.); Effect of yeast inoculum size on fermentation rate and formation of higher alcohols, by Yu. S. Bartenev, V. V. Zhukovskaya & L. S. Kovalevich (pp. 231-234, 6 ref.); Enzymic catalysis and biochemical processes in must and wine, by E. N. Datunashvili (pp. 239-246, 8 ref.); Localization of polyphenoloxidase in the grape, by R. K. Mindadze (pp. 249-254, 6 ref.); The extracellular enzymes of wine yeasts and moulds, and methods of inducing their formation during alcoholic fermentation, by S. Kh. Abdurazakova, Kh. T. Salomov, T. M. Fomicheva, B. A. Babakhanov, T. M. Il'yasov & Z. Sh. Vaisova (pp. 266-269); [continued in following abstr.].
STI

201

[Problems of the Biochemistry of Grapes and Wine. Proceedings of the 2nd Conference on the Biochemistry of Grapes and Wine, 1973.] Voprosy biokhimii vinograda i vina. Trudy vtoroi vsesoyuznoi konferentsii po biokhimii vinodeliya i vina, 1973. [Conference proceedings]
Union of Soviet Socialist Republics, Institut Biokhimii imeni A. N. Bakha; **Union of Soviet Socialist Republics**, Vsesoyuznyi Nauchno-issledovatel'skii Institut Vinodeliya i Vinogradarstva "Magarach"
428pp. (1975) [many ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost Price 2.58r

[Continued from preceding abstr.] Major biochemical changes during grape juice production using pectolytic enzyme preparations, by G. G. Mikeladze & P. D. Nioradze (pp. 269-276, 7 ref.); Biochemical principles of application of the enzyme preparation Tsitorozemin [Citorozemin] P10Kh in winemaking, by V. I. Zinchenko, V. V. Arkhipova, L. S. Salmanova, V. D. Alekseichuk, T. A. Granatskaya, M. V. Unguryanu, F. L. Minchuk & V. A. Yazlovetskaya (pp. 283-287, 6 ref.); Isolation, purification and study of some Soviet commercial enzyme preparations, by E. V. Vorob'eva (pp. 287-290); Separation of the pectolytic complex of enzyme preparations by gel filtration, by E. V. Yudin & Yu. N. Lysikov (pp. 290-293, 3 ref.); Some results of and prospects for study of phenolic compounds in grapes and wine, by G. G. Valuiko & M. A. Bokuchava (pp. 294-305); Formation of aldehydes and their role in raw materials and red sparkling wines, by G. A. Gavrish (pp. 365-370, 6 ref.); Study of biochemical processes occurring during the production of sparkling wine, using radioactive indicators, by E. S. Drboglav, N. N. Glonina & L. V. Dubinchuk (pp. 371-375); [continued in following abstr.].
STI

202

[Problems of the Biochemistry of Grapes and Wine. Proceedings of the 2nd Conference on the Biochemistry of Grapes and Wine, 1973.] Voprosy biokhimii vinograda i vina. Trudy vtoroi vsesoyuznoi konferentsii po biokhimii vinodeliya i vina, 1973. [Conference proceedings]
Union of Soviet Socialist Republics, Institut Biokhimii imeni A. N. Bakha; **Union of Soviet Socialist Republics**, Vsesoyuznyi Nauchno-issledovatel'skii Institut Vinodeliya i Vinogradarstva "Magarach"
428pp. (1975) [many ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost Price 2.58r

[Continued from preceding abstr.] Biochemical characteristics of bottled wine for sparkling wine production, by E. S. Drboglav & V. S. Gulyaeva (pp. 376-378); Problems relating to the chemistry and biochemistry of brandy and brandy production, by I. A. Egorov (pp. 386-392); and Transformation of substances on enrichment of wine spirits with oak constituents during distillation, by E. L. Mndzhoyan & A. S. Saakyan (pp. 392-394). A further 36 papers are abstracted individually and given in the author index under **Union of Soviet Socialist Republics**, Institut Biokhimii imeni A. N. Bakha [Grape/Wine Symposium]. STI

203

[Basis of continuous alcohol and acetone-butanol fermentation.] Osnovnye zakonomernosti neprirovnogo spirtovogo i atsetonobutylovogo brozheniya. [Book]
Yarovenko, V. L.
102pp. (1975) [Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 0.34r

The book, which summarizes the continuous cultivation of microorganisms, is intended for those working in the fermentation industry, and includes the following chapters: General problems of continuous cultivation of microorganisms (pp. 5-16); Continuous mixing of liquid in batteries of vessels (pp. 17-24); Effects of fermentation time on broth acidity (pp. 25-29); Fermentation time and yield of alcohol (pp. 30-36); Kinetics of fermentation (pp. 37-49); Operation of the main fermentor of a fermentation battery during continuous fermentation (pp. 50-70); Supplementary equipment for continuous fermentation (pp. 71-73); Development of methods for continuous ethanol fermentation (pp. 74-86); and Development of methods for continuous acetone-butanol fermentation (pp. 87-91). STI

204

[Technology of alcohol production from molasses.] Tekhnologiya spirta iz melassy. [Book]
Marinchenko, V. A.; Metyushev, B. D.; Shvets, V. N.
282pp. (1975) [Ru] Kiev, USSR; Izdatel'skoe Ob"edinenie "Vyssha Shkola", Golovnoe Izdatel'stvo Price 0.83r

The book, intended for students of specialized schools of food technology and for distillery technicians, includes the following chapters: Molasses as a raw material for distilleries (pp. 5-21); Auxiliary materials used in the production of alcohol from molasses (pp. 22-28); Characteristics of individual stages of alcohol production from molasses: a technological scheme for processing molasses in distilleries (pp. 29-51); Preparation of molasses for fermentation (pp. 52-75); Cultivation of yeasts (pp. 76-159); Theoretical principles of yeast cultivation and fermentation (pp. 160-178); Technological scheme for processing molasses to alcohol (pp. 179-207); Distillation and rectification of ethyl alcohol (pp. 208-237); Utilization of wastes from molasses processing distilleries (pp. 238-276); and Losses and yields of alcohol (pp. 277-281). STI

FRUIT AND VEGETABLES

205

Commercial fruit processing. [Book]
Woodroof, J. G.; Luh, B. S.
x + 710pp. ISBN 0-87055-178-7 (1975) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co., Inc. Price $39 (US) $40 (Foreign) [Dept. of Food Sci., Univ. of Georgia, Experiment, Georgia, USA]

The purpose of the book is to bring present knowledge up-to-date and to assist in continued improvement in commercial fruit processing. The following chapters are included: History and growth of fruit processing, by J. G. Woodroof (pp. 1-31, 18 ref.); Fruit harvesting, handling and storage, by J. G. Woodroof (pp. 32-77, 56 ref.); Fruit washing, peeling, and preparation for processing, by J. G. Woodroof (pp. 78-89, 20 ref.); Seasonal suitability of fruits for processing, by J. G. Woodroof (pp. 100-112, 3 ref.); Factors affecting microflora in processed fruit, by E. J. Hsu (pp. 113-140, 88 ref.); Canning of fruits, by B. S. Luh & C. E. Kean (pp. 141-265, many ref.); Freezing of fruits, by B. S. Luh, B. Feinberg & J. I. Chung (pp. 266-373, many ref.); Dehydration of fruit, by L. P. Somogyi & B. S. Luh (pp. 374-429, 80 ref.); Brining cherries and other fruits, by G. G. Watters (pp. 430-446, 80 ref.); Other methods of fruit processing, by J. G. Woodroof (pp. 447-496, 45 ref.); Flavour and colour of fruits as affected by processing, by A. L. Shewfelt (pp. 497-538, 86 ref.); Composition and nutritive value of raw and processed fruits, by C. T. Young (pp. 539-579, 27 ref.); Grades and standards for raw and processed fruits, by J. G. Woodroof (pp. 580-594, 8 ref.); Storage life of canned, frozen, dehydrated, and preserved fruits, by J. G. Woodroof (pp. 595-626, 21 ref.); Plant sanitation and waste disposal, by J. G. Woodroof (pp. 627-669, 24 ref.); and Consumption trends and prospects, by W. K. Trotter (pp. 670-699, 23 ref.). VJG

206

Crop production in dry regions. Vol. II. Systematic treatment of the principal crops. [Book]
Arnon, I.
xxvi + 683pp. ISBN 0-249-44086-5 (1972) [many ref. En] London, UK; Leonard Hill Books

This volume deals with specific crops and their cultivation in dry regions, including brief information on yield and utilization. It includes grain crops (wheat, barley, sorghum, millets, maize, rice, and individual pulses) (pp. 1-260), and industrial crops (cotton, groundnuts, safflower, sesame, castor-beans, linseed, sunflower, soybeans, sugar beet and sugar cane) (pp. 261-485). AL

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Commercial vegetable processing. [Book]
Luh, B. S.; Woodroof, J. G.
xi + 755pp. ISBN 0-87055-186-8 (1975) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co. Inc. [Dep. of Food Sci., Univ. of California, Davis, California, USA] Price $36 (USA) $37 (Foreign)

This book covers the entire vegetable processing industry from harvesting to storage of the finished product. It is intended for plant managers, superintendents, quality assurance managers, food chemists, researchers and those interested in technical knowledge of the food processing industry. Chapters included are: General principles and methods, by B. S. Luh & G. K. York (pp. 1-32 53 ref.); Microorganisms in relation to vegetable processing, by E. J. Hsu (pp. 33-82, 74 ref.); Tin, glass and plastics containers, by H. C. Chen, C. Y. Wang & B. S. Luh (pp. 83-130, 19 ref.); Harvesting, handling and storing vegetables for processing, by J. G. Woodroof (pp. 131-175, 38 ref.); Washing, blanching, peeling and preparation, by J. G. Woodroof (pp. 176-194, 20 ref.); Canning of vegetables, by B. S. Luh & C. E. Kean (pp. 195-289, many ref.); Vegetable juices, by C. S. Pederson (pp. 290-316, 74 ref.); Freezing preservation of vegetables, by B. S. Luh, B. Feinberg & J. J. Meehan (pp. 317-360, 62 ref.); Vegetable dehydration, by B. S. Luh, L. P. Somogyi & J. J. Meehan (pp. 361-415, 77 ref.); Freeze-drying, by C. F. Li (pp. 416-456, 60 ref.); [Continued in following abstr.]. VJG

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Commercial vegetable processing. [Book]
Luh, B. S.; Woodroof, J. G.
xi + 755pp. ISBN 0-87055-186-8 (1975) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co. Inc. [Dep. of Food Sci., Univ. of California, Davis, California, USA] Price $36 (USA) $37 (Foreign)

[Continued from preceding abstr.] Pickles and sauerkraut, by C. S. Pederson (pp. 457-490, 42 ref.); Grades and standards, by G. Niketic-Aleksic & B. S. Luh (pp. 491-534, 20 ref.); Quality control, by B. S. Luh & R. O'Neal (pp. 535-602, 50 ref.); Plant sanitation and waste disposal, by J. G. Woodroof (pp. 603-638, 16 ref.); Composition and nutritive value of vegetables for processing, by M. Yamaguchi & C. M. Wu (pp. 639-693, many ref.); Storage life and objective criteria for quality, by J. G. Woodroof (pp. 694-710, 12 ref.); Nutrition labelling, by C. A. Raab & B. S. Luh (pp. 711-728, 36 ref.); Vegetables in soups, by S. L. Komarik, B. S. Luh & A. K. Sutton (pp. 729-745, 14 ref.). VJG

209

Symposium: Postharvest biology and handling of fruits and vegetables. [Book]
Haard, N. F.; Salunkhe, D. K. (**United States of America**, Institute of Food Technologists) (Editors)
xii + 193pp. ISBN 0-87055-187-6 (1975) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co. Inc. Price $21 (US) $22 (Foreign) [Rutgers State Univ., New Brunswick, New Jersey, USA]

Papers presented at the thirty-third Annual Meeting of the Institute of Food Technologists, in Miami, Florida are arranged under the following 4 section headings: Introduction (pp. 1-4); Biochemical control (pp. 5-42); Quality indices (pp. 43-80); and Handling and storage (pp. 81-188). Chapters included are: Perspectives in postharvest physiology, by N. F. Haard & D. K. Salunkhe (pp. 1-4); Synthetic and degradative processes in fruit ripening, by J. B. Biale (pp. 5-18, 17 ref.); Role of auxin in the regulation of fruit ripening, by C. Frenkel, R. Dyck & N. F. Haard (pp. 19-34, 47 ref.); Preharvest nutrition and postharvest physiology of apples, by C. B. Shear & M. Faust (pp. 35-42, 33 ref.); Anatomy of toughness in plant tissues, by C. Sterling (pp. 43-54, 82 ref.); Ultrastructure of polysaccharides in relation to texture, by G. G. Dull & G. F. Leeper (pp. 55-61, 9 ref.); Anthocyanin pigments in foods, by P. Markakis (pp. 62-72, 44 ref.); Quality evaluation of fruits and vegetables by spectrophotometric technique, by A. E. Watada (pp. 73-80, 12 ref.); Postharvest diseases of fresh fruits and vegetables - etiology and control, by J. W. Eckert (pp. 81-117, many ref.). [Continued in following abstr.] VJG

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Symposium: Postharvest biology and handling of fruits and vegetables. [Book]
Haard, N. F.; Salunkhe, D. K. (**United States of America**, Institute of Food Technologists) (Editors)
xii + 193pp. ISBN 0-87055-187-6 (1975) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co. Inc. Price $21 (US) $22 (Foreign) [Rutgers State Univ., New Brunswick, New Jersey, USA]

[Continued from preceding abstr.] Irradiation treatment of fruits and vegetables, by R. A. Dennison & E. M. Ahmed (pp. 118-129, 22 ref.); Controlled atmospheres for fresh vegetables and fruits - why and when, by W. J. Lipton (pp. 130-143, 29 ref.); Storage stability and quality of produce packaged in polymeric films, by Y. S. Henig (pp. 144-152, 18 ref.); Subatmospheric storage of fruits and vegetables, by D. K. Salunkhe & M. T. Wu (pp. 153-171, 11 ref.); and Hypobaric storage and transportation of fresh fruits and vegetables, by S. P. Burg (pp. 172-188, 26 ref.). VJG

211

Grape drying in Australia. [Booklet]
Australia, Dried Fruits Processing Committee (**Australia**, Victoria Department of Agriculture **Australia**, New South Wales Department of Agriculture **Australia**, South Australian Department of Agriculture **Australia**, CSIRO Division of Horticultural Research)
20pp. ISBN 0-643-00053-4 (1973) [23 ref. En] Melbourne, Australia

This booklet covers the following aspects of grape drying: var.; production and vineyard area; climate; maturity and harvesting; methods of harvesting; drying racks; drying (theory, drying of currants, sultanas, and Gordos and Waltham Cross); removal of dried fruit from the rack and finishing off; dehydration (rack dehydrator, bin dryers); boxing; quality grading; processing; and pest control in stored dried vine fruit. VJG

212

Potato processing. [Book]
Talburt, W. F.; Smith, O.
Ed. 3, xiii + 705pp. ISBN 0-87055-180-9 (1975) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co. Inc. Price $49 (US) $50 (Foreign)

Most of the chapters in this third edition have been brought up to date by citations and discussion of the literature up to 1974. Some chapters have been completely rewritten, others have been extensively revised to include the latest information on newer technology. Extensive additions have been made to the chapters on the nutritive value of potatoes, potato chips and waste disposal. Chapters included are: History of potato processing, by W. F. Talburt (pp. 1-10, 7 ref.); Structure and chemical composition of potato tuber, by W. F. Talburt, S. Schwimmer & H. K. Burr (pp. 11-42, many ref.); Potato varieties, by N. R. Thompson (pp. 43-66, 84 ref.); Effect of cultural and environmental conditions on potatoes for processing, by O. Smith (pp. 67-125, many ref.); Tuber diseases, by W. J. Hooker (pp. 127-156, many ref.); Sprout inhibition, by R. L. Sawyer (pp. 157-169, 53 ref.); Effect of transit and storage conditions on potatoes, by O. Smith (pp. 171-233, many ref.); The nutritive value of potatoes, by C. M. McCay, J. B. McCay & O. Smith (pp. 235-273, many ref.); Peeling potatoes for processing, by C. C. Huxsoll & T. Smith (pp. 275-304, 43 ref.); Potato chips, by O. Smith (pp. 305-402, many ref.); Frozen French fries and other frozen potato products, by M. L. Weaver, R. M. Reeve & R. W. Kueneman (pp. 403-442, many ref.); Dehydrated mashed potatoes - potato granules, by F. P. Boyle (pp. 443-462, 66 ref.) [Continued in following abstr.] VJG

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Potato processing. [Book]
Talburt, W. F.; Smith, O
Ed. 3, xiii + 705pp. (1975) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co. Inc. Price $49 (US) $50 (Foreign)

[Continued from preceding abstr.] Potato flakes, by M. Willard & G. Kluge (pp. 463-512, many ref.); Dehydrated diced potatoes, by R. W. Kueneman (pp. 513-545, 84 ref.); Potato starch, by R. H. Treadway (pp. 546-562, 17 ref.); Potato flour, by M. Willard (pp. 563-578, 15 ref.); Canned white potatoes, by W. F. Talburt (pp. 579-591, 7 ref.); Pre-peeled potatoes, by B. Feinberg, R. L. Olson & W. R. Mullins (pp. 592-619, 30 ref.); Miscellaneous products from potatoes, by C. Feustel (pp. 620-638, 15 ref.), and Waste disposal, by R. E. Pailthorp, J. W. Filbert & G. A. Richter (pp. 646-693, 78 ref.). The appendix consists of 2 parts: Chemical Oxygen Demand (COD) test; and Dinitrophenol method for reducing sugars. VJG

214

Quality of horticultural products. [Book]
Arthey, V. D.
228pp. ISBN 0-408-70645-7 (1975) [many ref. En] London, UK; Butterworth & Co. Ltd. Price £5.50 [Agric. Dep., Campden Food Preservation Res. Ass., Chipping Campden, Glos., UK]

This book discusses the characteristics for assessing quality of fruits, vegetables, their products, flowers and plants, their relationship to methods of measurement and world grading systems, and their application to the many markets open to horticultural products. The 15 chapters cover standardization and legislation, quality characteristics, nutritional value, colour, texture, condition, size, shape, form and style, yield, flavour, defects, plant health, processing qualities, and seed quality. References follow each chapter and there is a 5 pp. index. AL

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[Handbook on the quality of vegetables and potatoes.] Spravochnik po kachestvu ovoshchei i kartofelya. [Book]
Sokol, P. E.; Yailoyan, B. A.
110pp. (1974) [Ru] Kiev, USSR; Izdatel'stvo "Urozhai". Price 0.40r

Problems of the influence of cultivation method on vegetable quality are discussed. Special attention is paid to methods of storage prior to processing. The book should be of use to vegetable growers and specialists engaged in vegetable processing. The following chapters are included: Chemical composition and food value of vegetables and potatoes (pp. 3-9); Tomatoes, peppers and egg plants (pp. 9-29); Cucumbers and pumpkins (pp. 29-57); Cabbage (pp. 57-65); Root crops (pp. 65-73); Onion, garlic and leek (pp. 73-81); Some other vegetables (pp. 81-83); Packaging and transportation containers (pp. 83-87); Potatoes (pp. 87-105); and Effect of herbicides and chemical preparations (pp. 105-108). STI

216

[Exploitation of wastes from the fruit and vegetable canning industry.] Ispol'zovanie otkhodov plodoovoshchnoi konservnoi promyshlennosti. [Book]
Gryss, Z.
267pp. (1974) [252 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 1.16r

This book, which is translated from Polish, acquaints the reader with the problems of modern methods of wate utilization. It should be of use to workers engaged in the fruit and vegetable processing industry, plant designing, in the chemical and pharmaceutical industry, in perfumery and cosmetics, in distilleries and spirit production as

well as specialists in agriculture. The following chapters are included: Economic justification of the exploitation of fruit and vegetables processing industry wastes (pp. 7-12); Waste formation and types of wastes (pp. 12-15); Exploitation of fruit and vegetables processing industry wastes for feedingstuff production (pp. 15-120); Specific trends in wastes exploitation (pp. 120-139); and Exploitation of wastes for pectin production, production of spirits, organic acids, dyes and other industrial products (pp. 139-267). STI

217

[The transportation and storage of fruit.] Perevozka i khranenie fruktov. [Book]
Alekseev, E. P.
79pp. (1974) [Ru] Moscow, USSR; Izdatel'stvo 'Transport' Price 0.29r

This publication is designed for persons engaged in the large-scale (refrigerated) handling of fruit (e.g. employees on refrigerated road or rail transport systems and, particularly, the crews of refrigerated transport ships and harbour facility employees). Chapters are: Fruit characteristics (pp. 5-13); The modern refrigerated fleet (pp. 13-16); Technology of refrigerated transport of fruit by sea (pp. 16-35); Commercial exploitation of fruit ships, and the receivers requirements (pp. 36-52); Transport of fruit by rail and road (pp. 53-59); and Specific aspects of fruit storage (pp. 59-74). HBr

218

[Citrus fruits as raw material for the manufacture of juices and other products.] Citrusfrüchte als Rohware für die Herstellung von Säften und anderen Erzeugnissen. [Book]
Monselise, S. P.
200pp. (1973) [many ref. De] Braunschweig, Federal Republic of Germany; Verlag Günter Hempel Price DM42 [Fak. für Landwirtschaft, Hebrew Univ., Rehovot, Israel]

This detailed textbook on citrus fruit (volume 2 of the monograph series 'Fruit juices and other fruit products') includes the following chapters: World production of citrus fruits, and trends in their use (pp. 13-19); Cultivated citrus species and varieties, with special reference to their suitability for industrial processing (pp. 21-48); Morphology and anatomy of the ripe citrus fruit (pp. 49-53); Dynamics of fruit development (pp. 55-61); Biosynthesis and accumulation of important chemical constituents of citrus fruit (pp. 63-87); Standards for the ripeness of citrus fruit (pp. 89-96); Variability within and between fruit: sampling problems (pp. 97-104); Climatic effects on fruit characteristics (pp. 105-123); Effects of rootstock and soil on fruit characteristics (pp. 125-136); Effects of mineral nutrients on fruit quality and yield (pp. 137-146); Effects of various agrotechnical measures on fruit quality and yield (pp. 147-154); Effects of chemical sprays (plant regulators, pesticides) on fruit quality and yield (pp. 155-164); Harvesting methods (pp. 165-168); and Post-harvest behaviour of citrus fruit (pp. 169-176). A 6-page bibliography and a 9-page subject index are included. AJDW

219

[Laboratory control in the canning, dehydrated vegetable and food concentrate industries.] Laboratornyi kontrol'konservnogo, ovoshchesushil'nogo i pishchekontsentratnogo proizvodstva. [Book]
Solov'eva, E. I.
279pp. (1974) [17 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.85r

Data relating to the preparation of reagents used for the analysis of raw materials, semi-finished products and finished products and to laboratory equipment are given as well as information on basic technological calculations relating to the control of the production process. The book will be of use to laboratory workers in the above industries. The following chapters are included: Organization of laboratories (pp. 5-39); Preparation of solutions (pp. 39-61); Preparation of representative samples for analysis (pp. 61-71); Laboratory analysis methods (pp. 71-107); Analysis of raw materials and preserved food products (pp. 107-216); Pesticides, methods of the detn. of pesticide residues in food products (pp. 216-244); and Quality control of glass packaging, plastics rings and lids (pp. 244-274). STI

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Commercial processing of vegetables. [Book]
Hanson, L. P.
Food Technology Review, Noyes Data Corporation
No. 27, xii + 449pp. ISBN 0-8155-0593-0 (1975) [En] Park Ridge, New Jersey, USA; Noyes Data Corp. Price $36

This book, which is based on US patents issued since 1965, deals with commercial methods and techniques for processing vegetables. The information is arranged under the following headings: General dehydration processes for vegetables (pp. 2-44); Other general processes for vegetables (including canning, freezing, preservatives for vegetables, coatings and films for vegetables, sauces for frozen vegetables) (pp. 45-108); Processes for instant mashed potatoes (pp. 109-169); Processing fried potato products (including French fried potato processes, fabricated French fried potatoes, and hash brown potato pieces (pp. 170-221); Other potato processes (including peeling, cooking, drying) (pp. 222-246); Processing other root vegetables (sweet potatoes, carrots, beets, and radishes) (pp. 247-271); Bulbs (including lye peeling onions, dehydrated bulb products, Allium condiments and French fried onion rings) (pp. 272-295); Stems, leaves and flower heads (including lettuce, spinach, cabbage-type vegetables and asparagus) (pp. 296-317); Processing of vegetable seeds (including legumes and corn)) (pp. 318-367); Tomato processing (including juice, ketchup, concentrate, dehydrated product, quick frozen slices and tomato flavour

enhancers) (pp. 368-405); Processing other vegetable fruits (pumpkins and cucumbers) (pp. 406-421); and Processing mushrooms (pp. 422-440). Company, inventor and patent number indexes are included. VJG

221

Storage, processing, and nutritional quality of fruits and vegetables. [Book]
Salunkhe, D. K. (Editor)
166pp. (1974) [many ref. En] Cleveland, Ohio, USA; CRC Press, Inc. Price $18.95 [Dep. of Nutr. & Food Sci., Utah State Univ., Logan, Utah, USA]

This book reviews information on the nutritional value and quality of fruit and vegetables as influenced by chemical treatments, storage and processing conditions. It is divided into 4 parts: Assessment of nutritive value, quality and stability of cruciferous vegetables during storage and subsequent processing, by D. K. Salunkhe, S. K. Pao & G. G. Dull (pp. 1-38); Developments in technology and nutritive value of dehydrated fruits, vegetables, and their products, by D. K. Salunkhe, J. Y. Do & H. R. Bolin (pp. 39-78); The use of certain chemicals to increase nutritional value and to extend quality in economic plants, by M. T. Wu & D. K. Salunkhe (pp. 79-120); and Developments in technology of storage and handling of fresh fruits and vegetables, by D. K. Salunkhe & M. T. Wu (pp. 121-160). The information originally appeared as articles in CRC Critical Reviews in Food Technology [See FSTA (1973) **5** 12J1974 & (1974) **6** 3J385, 7J959 and 11J1480]. VJG

222

Commercial processing of fruits. [Book]
Hanson, L. P.
Food Technology Review, Noyes Data Corporation No. 30 x + 302pp. ISBN 0-8155-0608-2 (1976) [En] Park Ridge, New Jersey, USA; Noyes Data Corp. Price $36

This book is based on US patents issued since 1965 that deal with commercial methods and techniques for processing fruits. It reviews some 174 processes on the processing of fruit. Processing as used here, includes the handling of fresh fruit for storage and transportation plus a few select methods for treating preharvested fruit which improve their quality after harvesting. The information is arranged under the following headings: Handling fresh fruit (pp. 2-40); General dehydration processes (including freeze-drying, drum drying, reverse osmosis) (pp. 41-100); Other general processes (including peeling, canning, freezing, and stabilization) (pp. 101-151); Citrus fruit (pp. 152-174); Pomes (pp. 175-204); Drupes (including olives, cherries, peaches, and plums) (pp. 205-235); Berries (including cranberries, strawberries, blueberries and raspberries) (pp. 236-252); Grapes (pp. 253-259); Bananas (pp. 260-275); and Other fruit (avocados, dates, melons, coconuts, and pineapples) (pp. 276-295). Company, inventor and US patent number index are included. VJG

223

Mechanising vegetable production. [Book]
Robertson, J.
195pp. (1974) [3 ref. En] Ipswich, Suffolk; Farming Press Ltd. Price £3.30

This comprehensive book covers the whole range of vegetable techniques, from the preparation of the soil to the packhouse-loading bay. The first 6 chapters cover soil preparation, bed system, drilling, planting, thinning and irrigation of field vegetables. Additional chapters include: Crop protection (pp. 93-108); Harvesting - green vegetables (Brussels sprouts, field lettuce, cauliflower, cabbage, green peas and broad beans, dwarf or French beans) (pp. 109-124); Harvesting - root vegetables (simple lifters, complete harvesters, harvesting specific root crops, 2-stage harvesting, danger of neckrot, damage at harvesting) (pp. 125-138); Packhouses (1): Packhouses for root vegetables (including packhouse principles, designing the layout, root lines, water consumption, other constant aperture graders, increasing-aperture grades, grading carrots by length, producing a good quality product) (pp. 139-155); Packhouses (2): Leafy and salad vegetables (including trimming and washing, sizing and packing, disposing of rubbish, packhouses for Brussels sprouts, pre-cleaning, grading and packing, automatic weighing equipment, netting and bagging, and wrapping) (pp. 156-174); and Crop conditioning and storage (including dry bulk onions and red beet storage) (pp. 175-190). An appendix 'Common size grades: carrots and onions' is included. VJG

224

Plants consumed by man. [Book]
Brouk, B.
ix + 479pp. ISBN 0-12-136450-X (1975) [104 ref. En] London, UK; Academic Press Inc. (London) Ltd. Price £14.80 [Polytechnic of the South Bank, London, UK]

This comprehensive, well illustrated book provides a survey of plants for human consumption, including all primary food plants, those which yield non-nutritive ingredients, and bacteria and fungi which produce edible materials or are themselves consumed. The plants are defined botanically but are grouped according to common usage. A brief history of each plant is included together with a note on cultivation, suitability for processing and special features of interest. The book should be of interest to agriculturists, food scientists and botanists. Chapters include are: Introduction (pp. 1-12); Cereals and pseudo-cereals (pp. 13-39); Vegetables (including Cyanophyta, algae, fungi (macrofructifications), Pteridophyta, Angiospermae) (pp. 40-147); Fruit (pp. 148-204); Nuts (including Gymnospermae, and Angiospermae) (pp. 205-225); Plant extracts (including starch plants, oil plants, protein plants, sugar plants, gum plants, vegetable food dyes and wood smoke) (pp. 226-269); Flavouring plants (pp. 270-336); Beverage plants (pp. 337-369); Fumitories and masticatories (pp. 370-385); and Fermentative microorganisms (pp. 386-393).

Appendices included are: Morphological survey of the commonest plants consumed by man (pp. 397-430); Glossary (pp. 431-447); Selected bibliography (pp. 448-452); List of plants in order of appearance in the text (pp. 453-457); and Index of scientific and common plant names (pp. 459-479). VJG

225

[Fruit and vegetable storage. Guide for the store keeper.] Frucht- und Gemüselagerung. Eine Anleitung für den Lagerwart. [Book]
Bünemann, G.; Hansen, H.
159pp. ISBN 3-8001-5256-8 (1973) [De] Stuttgart, Federal Republic of Germany; Eugen Ulmer Price DM32 [Inst. Für Obstbau & Baumschule der Tech. Univ. Hannover, Hanover, Federal Republic of Germany]

This practical manual on storage of fruit and vegetables includes the following sections: Evaluation of the suitability of produce for storage (pp. 8-14); Metabolic activity of the harvested produce (pp. 14-19); Storage conditions required by various products, including pome fruit, stone fruit, berries, vegetables, potatoes, cereals, tropical fruit, nuts, and dried fruit (pp. 20-86); Technological methods for maximization of storage life, with reference to control of temp., RH and storage atmosphere composition (pp. 86-117); Important parasitic diseases of stored fruit (pp. 117-125); Physiological disorders of pome fruit (pp. 125-134); Problems with storage installations, especially the refrigeration equipment (pp. 134-139); Storage costs (pp. 139-141); Conversion factors for use with foreign publications on fruit storage (pp. 141-144); and a world-wide listing of institutes involved in research on fruit storage (pp. 144-149). A 10-page subject index is given. AJDW

226

[Technology of fungi processing. Biology, chemistry, cultivation, processing, analysis.] Technologie der Pilzverwertung. Biologie, Chemie, Kultur, Verwertung, Untersuchung. [Book]
Bötticher, W.
208pp. ISBN 3-8001-3037-8 (1974) [many ref. De] Stuttgart, Federal Republic of Germany; Eugen Ulmer [Zentralstelle für Pilzforschung & Pilzverwertung, Munich, Federal Republic of Germany]

This comprehensive book on edible fungi includes the following chapters: Systematics (pp. 11-13); The main domestic edible and poisonous fungi (pp. 13-20); Chemical composition of fungi (pp. 21-44); Nutritional value (pp. 45-49); Fungi as seasonings (pp. 49-51); Fungi as feed (pp. 51-54); Poisoning by fungi (pp. 54-66); Constituents having antibiotic activity (pp. 66-71); Economic aspects (pp. 71-79); Cultivation on various substrates (pp. 80-92); Cultivation on wood (pp. 92-100); Cultivation of mycorrhizal fungi (pp. 100-104); Truffles (pp. 104-106); General aspects of processing of fungi (pp. 107-113); Processing of fresh fungi (pp. 113-162); Test methods for canned fungi (pp. 163-169); Detection of repackaged salted fungi (pp. 169-171); Test methods for dried fungi (pp. 171-175); and Legal aspects (pp. 176-184). A 21-page bibliography and a 3-page subject index are included. AJDW

227

Mushrooms as health foods. [Book]
Mori, K.
88pp. ISBN 0-87040-332-X (1974) [En] Tokyo, Japan; Japan Publications, Inc. Price $2.95; £1.50 [Japan Inst. of Mushrooms Res., Japan]

This amusingly illustrated book is devoted to the shiitake of Japanese forest mushroom (Lentinus edodes [Berk] Sing.), with particular emphasis on values claimed for it in the cure of vital illnesses, reduction of blood cholesterol and cure of vitamin-deficiency diseases. Chapters include: The roles of bacteria and fungi in the human diet (pp. 11-16); Mushrooms as food (pp. 17-39); Effects of mushroom foods (pp. 41-76); and Appetizing shiitake dishes (pp. 77-88). The book makes interesting reading, but the scope of the claims made will provide plenty of ammunition for the sceptic. HBr

CHOCOLATE

228

[Chemical composition, properties and flavour of cocoa beans.] Khimicheskii sostav, svoistva i vkusovye kachestva bobov kakao. [Book]
Kharlamova, O. A.
118pp. (1974) [134 ref. Ru] Moscow, USSR; Pishchevaya promyshlennost' Price 0.32r

Special attention is paid to the effect of cocoa bean quality on the flavour of chocolate and chocolate products. The following chapters are included: Composition and properties of fresh cocoa beans (pp. 9-12); Chemical composition of cocoa beans (pp. 12-29); Fermentation of cocoa beans (pp. 29-42); Aromatic materials in cocoa (pp. 42-54); Processing of cocoa beans (pp. 54-62); Chromatographic studies of phenolic compounds in cocoa beans (pp. 62-72); Effect of heat processing on the physico-chemical composition and phenolic compounds of cocoa beans (pp. 72-79); Cocoa production methods and their effect on cocoa properties and phenolic compounds (pp. 79-89); Research into the processes of chocolate mass processing (pp. 89-95); and Changes in the basic properties and phenolic compounds of chocolate mass in the course of conching (pp. 95-103). STI

229

Methods of analysis. [Book]
Office International du Cacao & du Chocolat
66pp. (1952-1973) [En] Zürich, Switzerland; Verlag Max Glättli

This loose-leaf book contains the Office

International du Cacao et du Chocolat methods of analysis of chocolate products, issued from 1952 to 1973. Methods described are: Sampling (p. 1-E/1952); Organoleptic examination (p. 2-E/1963); Determination of moisture (p. 3-E/1952); Determination of ash in cocoa and chocolate products (p. 4a-E/1973); Determination of alkali in ash (p. 4b-E/1952/1963); Cocoa beans (p. 5-E/1973); Determination of total N (protein) in cocoa and chocolate products (p. 6a-E/1972); Determination of milk protein in chocolates (p. 6b-E/1963) and addendum (p. 6b-E/F/D Addendum 1973); Sugar determination (in cocoa products with or without milk solids) (p. 7a-E/1960); Sucrose (p. 7b-E/1960); Determination of the sugars - lactose (p. 7c-E/1960), sucrose and lactose (p. 7d-E/1960) and sugar/sucrose (p. 7e-E/1963); Determination of total fat in cocoa products (p. 8e-E/1972); Determination of the mp of cocoa butter (p. 8b-E/1961); Cocoa butter indices and their determination (p. 8c-E/1965); UV-extinction values for cocoa butter (p. 8d-E/1973); UV-extinction values for cocoa butter after washing with 0.1N NaOH (p. 8e-E/1973); Determination of iso-oleic acid (p. 8g-E/1961); Determination of the semi-micro values (p. 8i-E/1960). [Continued in following abstr.] VJG

230

Methods of analysis. [Book]
Office International du Cacao & du Chocolat
66pp. (1952-1973) [En] Zürich, Switzerland, Verlag Max Glättli

[Continued from preceding abstr.] Electrometric pH determination of cocoa and chocolate products (p. 9-E/1972); Viscosity of chocolate - determination of Casson yield value and Casson plastic viscosity (p. 10-E/1973); Colorimetric determination of the cocoa pigments (p. 11-E/1963, 2 ref.); Transfer of packaging odours to cocoa and chocolate products (p. 12-E/1964, 1 ref.); Determination of cocoa powder fineness (p. 13-E/1970); Total sterol determination (p. 14-E/1970); Manufacturing process of small scale chocolate samples (p. 15-E/1971, 5 ref.); GLC analysis of sterols of cocoa butter (p. 16-E/1973, 3 ref.); Preparation of methyl esters of fatty acids (p. 17a-E/1973, 3 ref.); Analysis of methyl esters of cocoa butter fatty acids by GLC (p. 17b-E/1973, 1 ref.); and Wettability (p. 18-E/1973, 1 ref.). These methods are available from Max Glättli, International Chocolate Review, Niklausstrasse 4, 8035 Zürich 6, Switzerland. VJG

231

Cocoa. [Book]
Wood, G. A. R.
Ed. 3, xii + 292pp. ISBN 0-582-46667-9 (1975) [many ref. En] London UK; Longman Group Ltd. Price £9.00

This re-written 3rd edition is in the Tropical Agriculture Series (previous editions were by D. H. Urquhart). Since the 2nd edition in 1861, there have been considerable advantages in cocoa growing, breeding of improved varieties, control of pests and diseases, fermentation and drying, and in marketing. Chapters of particular relevance to food include: Harvesting and preparation (pp. 200-229, 49 ref.); Quality and inspection (pp. 230-240, 12 ref.); Marketing (pp. 241-251); and Production and consumption (pp. 252-266, 7 ref.). An appendix on international cocoa standards gives the text of the Model Ordinance and the Code of Practice (pp. 274-279). AL

SUGARS AND STARCHES

232

[Automation in the sugar industry.] Automatyzacja w przemysle cukrowniczym. [Book]
Dobrzycki, J.
458pp. (1974) [476 ref. Pl] Warsaw, Poland; Wydawnictwa Naukowo-techniczne. Price 52zl

The book consists of two parts, the 1st dealing with the principals of automation, measuring and control apparatus and with measuring techniques used in the sugar industry. The 2nd part gives a detailed survey of various automated processes in the sugar industry, including automation in the field of water management and power. STI

233

[Tables used in the sugar industry.] Cukrovarnicke tabulky. [Book]
Bretschneider, R.; Bohacenko, I.; Kadlec, P.; Kopriva, B.; Svoboda, A.
456pp. (1975) [Cs] Prague, Czechoslovakia; SNTL. Price 46Kcs

Tables and formulae relating to physical, chemical and agricultural aspects of sugar processing are presented, as well as tables, formulae and nomographs relating to analytical techniques, technology and machinery and power. The book is designed for workers in the sugar industry, laboratory personnel and students of specialized institutes. The following chapters are included: General tables (pp. 13-51); Analytical tables (pp. 53-91); Properties of saccharides and their solutions (pp. 93-197); Tables relating to sugar processing technology (pp. 199-303); Machinery and engineering (pp. 305-380); Nomographs (pp. 381-434); Dictionary of the common sugar industry terms in 5 languages (pp. 435-443); and A survey of Czech publications dealing with the sugar industry since 1950 (pp. 445-447). STI

234

[Technical and chemical control of starch and molasses production.] Tekhnokhimicheskii kontrol' krakhmalo-patochnogo proizvodstva. [Book]
Tregubov, N. N.; Tregubova, M. M.
313pp. (1974) [26 ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.77r

The book includes the following chapters: Physico-chemical methods (pp. 11-62); Chemical

methods (pp. 62-107); Study of raw materials and products obtained from potatoes (pp. 108-130); Study of raw materials and products obtained from corn (pp. 131-168); Control of auxiliary materials (pp. 169-178); and Preparation of solutions and reagents (pp. 179-213). The book is designed as a handbook for students and workers in the starch and molasses industries. STI

235

Physiological effects of food carbohydrates. [Conference proceedings]
Jeanes, A.; Hodge, J. (**United States of America**, American Chemical Society) (Editors)
xi + 355pp. ISBN 0-8412-0246-X (1975) [many ref. En] [Washington, DC, USA]

This Symposium, co-sponsored by the Division of Carbohydrate Chemistry and the Division of Agricultural and Food Chemistry at the 168th Meeting of the American Chemical Society, Atlantic City, New Jersey, Sept. 11-12, 1974, is issued as No. 15 in the ACS Symposium series. Papers presented at the symposium include: The physiology of the intestinal absorption of sugars, by R. K. Crane (pp. 2-19, 33 ref.); Metabolic effects of dietary carbohydrates - a review, by S. Reiser (pp. 20-45, 106 ref.); Benefits of dietary fructose in alleviating the human stress response, by J. D. Palm (pp. 54-72, 29 ref.); The metabolism of infused maltose and other sugars, by E. A. Young & E. Weser (pp. 73-99, 88 ref.); The metabolism of lactose and galactose, by R. G. Hansen & R. Gitzelmann (pp. 100-122, 102 ref.); Metabolism and physiological effects of the polyols (alditols), by O. Touster (pp. 123-134, 43 ref.); Metabolism and physiological effects of the pentoses and uronic acids, by O. Touster (pp. 135-149, 25 ref.); Role of carbohydrates in dental caries, by W. H. Bowen (pp. 150-155, 46 ref.); The role of trace elements in human nutrition and metabolism, by T. W. Tuman & R. J. Doisy (pp. 156-177, 59 ref.); Oligosaccharides of the small intestinal brush border, by G. M. Gray (pp. 181-190, 41 ref.); [continued in following abstr.]. VJG

236

Physiological effects of food carbohydrates. [Conference proceedings]
Jeanes, A.; Hodge, J. (**United States of America**, American Chemical ociety) (Editors)
xi + 355pp. ISBN 0-8412-0246-X (1975) [many ref. En] [Washington, DC, USA]

[Continued from preceding abstr.] Lactose intolerance and lactose hydrolysed milk, by D. M. Paige, T. M. Bayless, S.-S. Huang & R. Wexler (pp. 191-206, 33 ref.); α-Amylase inhibitors from plants, by J. J. Marshall (pp. 244-266, 75 ref.); Metabolism and physiological effects of pectins, by W. L. Chenoweth & G. A. Leveille (pp. 312-324, 39 ref.); The physiological effects of dietary fibre, by J. Scala (pp. 325-335, 34 ref.); and Digestibility of food polysaccharides by man: a review, by A. Jeans (pp. 336-347, 78 ref.). A further 4 papers are abstracted separately and appear in the author index under **United States of America**, American Chemical Society [Symposium]. VJG

237

[Chemistry and technology of starch.] [Conference proceedings]
Poland, Komitet Technologii i Chemii Zywnosci PAN
Zeszyty Problemowe Postepow Nauk Rolniczych
No. 159, 17-319 (1974) [many ref. Pl, ru, de]

Papers read at this International Symposium, held in Krakow on 26-27 Sept. 1972 and organized by the Komitet Technologii i Chemii Zywnosci PAN (Committee of Food Technology and Chemistry of the Polish Academy of Sciences) and the Instytut Chemii Ogolnej i Technologii Rolnej AR (Institute of General Chemistry and Agricultureal Technology of the Krakow Agricultural College) include the following: Microstructure of potato and wheat starch grains, by J. Hölzl (pp. 47-52, 23 ref., De, pl, ru); Rheology of non-gelatinized potato starch and its application in starch production, by A. H. A. de Willigen (pp. 53-57, 7 ref., De, pl, ru); Fractionation of potato starch to amylose and pectin by use of the quaternary basic salt octalon (trimethyloctylammonium bromide), by B. I. Stepanenko & E. V. Avakyan (pp. 77-85, 15 ref., Ru, pl, de); Rapid methods for evaluating the raw material used for production of maize starch - their potential and limitations, by W. Kempf (pp. 93-102, 5 ref., De, pl, ru); Mathematical equation for establishing the rheological properties of polymers and starch, by V. I. Deulin (pp. 127-140, 8 ref., Ru, pl, de); Chemical characteristics of lintnerized potato, cassava, wheat and maize starches, by J. P. Robin, C. Mercier, R. Charbonniere & A. Guilbot (pp. 141-153, 19 ref., Fr, pl, ru, de). [Continued in following abstr.] HBr

238

[Chemistry and technology of starch.] [Conference proceedings]
Poland, Komitet Technologii i Chemii Zywnosci PAN
Zeszyty Problemowe Postepow Nauk Rolniczych
No. 159, 17-319 (1974) [many ref. Pl, ru, de]

[Continued from preceding abstr.] Radiocrystallographic studies on lintnerized potato, cassava, wheat and maize starches, by F. Duprat, R. Charbonniere, J. P. Robin & A. Guilbot (pp. 155-164, 9 ref., De, pl, ru); Electron microscope studies of amyloses of potato, cassava, wheat and maize starches, by D. Gallant, A. Derrien, A. Aumaitre & A. Guilbot (pp. 165-170, 8 ref., Fr, pl, ru, de); Properties of swelling amylopectin starch of waxy maize, by A. I. Zhushman, E. K. Koptelova & N. M. Popova (pp. 177-186, 5 ref., Ru, pl, de); Viscosity stability and effect of pH on the viscosity of oxidized and acetylated potato starch, by L. Mezynski & J. Pawlak (pp. 187-192, 4 ref., Pl, ru, de); Effect of calcium complexes on polarization of starch and some hydrolysis products, by M. Boruch (pp. 205-210, 5 ref., Pl, ru, de); Dextrinization of potato starch in an acid medium, by J. Skalski & A. Sroczynski (pp. 211-217, 8 ref., Pl, ru, de); Mechanism of amylolytic starch degradation, by J. Hollo, E. Laszlo & A. Hoschke (pp. 227-255, 41

ref., De, Pl, ru); Use of the Centri-Therm evaporator for concn. of amylolytic extract from Aspergillus oryzae, by H. Kluszczyk, J. A. Bernat & W. Rzedowski (pp. 291-299, 12 ref., Pl, ru, de); Introductory tests on the effect of cellulytic and macerating enzyme preparations on potato tissue, by W. Rzedowski (pp. 301-304, 9 ref., Pl, ru, de). [Continued in following abstr.] HBr

239

[Chemistry and technology of starch.] [Conference proceedings]
Poland, Komitet Technologii i Chemii Zywnosci PAN
Zeszyty Problemowe Postepow Nauk Rolniczych
No. 159, 17-319 (1974) [many ref. Pl, ru, de]

[Continued from preceding abstr.] Application of starch syrups to the soft drink industry (chemical, technological and physiological considerations), by G. G. Birch (pp. 315-319, 5 ref., En, pl, ru, de). Another 11 papers are abstracted individually and indexed under **Poland**, Komitet Technologii i Chemii Zywnosci PAN [Symposium]. HBr

240

[Manufacture of raw and white sugar.] Vyroba suroveho a bileho cukru. [Book]
Gebler, J.
168pp. (1975) [19 ref. Cs] Prague, Czechoslovakia; SNTL. Price 12Kcs

This book, the 4th in a series of publications dealing with white and raw sugar manufacture, is designed for workers in sugar plants as well as students of specialized schools. The following chapters are included: Principles of sugar crystallization (pp. 12-29); Raw materials for massecuite production (pp. 30-35); Boiling of massecuite (pp. 36-89); Properties of massecuite (pp. 90-94); Massecuite processing using agitators (pp. 95-103); Low grade sugar (pp. 103-113); Centrifugation of massecuite (pp. 114-129); Raw sugar and its storage (pp. 130-136); Molasses and their utilization (pp. 137-144); and Defects of massecuite processing and of raw sugar and molasses storage (pp. 145-166). STI

241

Edible starches and starch-derived syrups. [Book]
Petersen, N. B.
Food Technology Review, Noyes Data Corporation
No. 24, xii + 427pp. ISBN 0-8155-0584-1 (1975) [En] New Jersey, USA; Noyes Data Corporation Price $36

This book is based on US patents since 1968 relating to edible starches and starch-derived syrups. The information is arranged under the following headings: Introduction (pp. 1-3); Isolation and use of raw starches (including starch from corn, sorghum and wheat, and unmodified starches in food processing) (pp. 4-34); Treatment of starches (pp. 35-61); Gelatinized starches (pp. 62-98); Starch esters (including starch carboxylates and starch phosphates) (pp. 99-134); Starch ethers (pp. 135-167); Amylose and amylopectin (pp. 168-200); Low DE starch degradation products (pp. 201-245); Starch syrups (pp. 246-282); Corn syrup solids and dextrose (pp. 283-312); Maltose and lower oligosaccharide syrups (pp. 313-354); and Fructose from starch hydrolysates (pp. 356-418). Company, inventor and patent number indexe are included. VJG

242

The sugar cane. [Book]
Barnes, A. C.
Ed. 2, xviii + 572pp. ISBN 0-249-44029-6 (1974) [many ref. En] Aylesbury, Bucks., UK; Leonard Hill Books Price £11.00

This revised and up-dated 2nd edition [1st edition published in 1964] gives a comprehensive and authoritative survey of the cane sugar industry and will be of value to all those involved in the industry. Chapters are: History and development as a world crop (pp. 1-19); Botany of the sugar cane (pp. 20-33); Sugar-cane breeding (pp. 34-56); Sugar-cane growing countries (pp. 57-132); Sugar-cane soils (pp. 133-147); Drainage and irrigation (pp. 148-206); Fertilizers and soil amendments (pp. 207-237); Plantation and field planning (pp. 238-256); Propagation of the cane (pp. 257-266); The planting and culture of the cane (pp. 267-284); Weeds and their control (pp. 285-305); Diseases and pests of sugar cane (pp. 306-343); Cane fires and their control (pp. 344-357); Harvesting the cane (pp. 358-394); Field, farm and regional records (pp. 395-411); Composition of the cane (pp. 412-420); Sugar cane as an industrial raw material (pp. 421-445); Process by-products (pp. 446-469); Organization and control of the cane-sugar industry (pp. 470-487); Evaluation of the cane (pp. 488-513); and Research (pp. 514-537). Also included are a glossary (pp. 538-539); a bibliography (pp. 541-551); and conversion factors (pp. 552-554). JA

243

[The application of starch in the food industry.]
Die Anwendung der Stärke in der Lebensmittelindustrie. [Book]
Zobel, M.
165pp. (1975) [36pp. of ref. De] Hamburg, Federal Republic of Germany; Verlag Paul Parey Price DM48

This detailed book, number V-5 in the series 'Starch Handbook in Individual Monographs' includes the following chapters: Introduction (pp. 9-39, covering the various types of starches, starch derivatives and modified starches used in the food industry); Foods of plant origin (pp. 39-85); Foods of animal origin (pp. 86-96); Edible fats (pp. 97-97); Sauces (pp. 97-101); Prepared meals and snacks (pp. 102-103); Dietetic foods (pp. 103-113); Food coatings (pp. 113-116); Spices and seasonings (pp. 116-121); Colorants (pp. 121-122); Alcoholic drinks, coffee, cocoa products and tobacco (p. 122); Starch as a vitamin stabilizer (pp. 122-123); and Other uses (p. 123). A 36-page bibliography and a 6-page subject index are included. AJDW

244

This is liquid sugar. [Book]
Hoynak, P. X.; Bollenback, G. N.
Ed. 2, vi + 259pp. (1966) [many ref. En]
Yonkers, New York, USA; Refined Syrups & Sugars Inc.

This book is a working guide and reference source for those using and interested in liquid sugar and blends. This 2nd edition has been revised to cover developments in the liquid sugar field since the 1st edition was published in 1955. Charts and tables have been up-dated and new photographs and standards added. Chapters are: Definitions (p. 1); History of liquid sugar and blends (pp. 2-6, 5 ref.); Production of liquid sugar and blends (pp. 7-18, 1 ref.); Distribution of liquid sugar and blends (pp. 19-22); Automatic liquid bulk handling systems (pp. 23-32); Liquid sugar and blends in industry (pp. 33-56, 8 ref.); Federal regulations of the use of cane, beet and corn sweeteners in food products (pp. 57-67); Analytical methods for liquid sweeteners (pp. 68-154); and Technical data (pp. 155-246), covering, e.g. sp. gr., viscosity, bp, and fp relations of liquid sweeteners. Appendices give: typical analyses of Flo-Sweet liquid sugar and blends (pp. 247-248); a report on the evaluation of mixed sugars syrup in carbonated beverages (pp. 249-252); and a glossary (pp. 253-255). JA

245

This is liquid sugar. [Book]
Hoynak, P. X.; Bollenback, G. N.
Supplement, 41pp. (?1975) [En] Yonkers, New York, USA; Refined Syrups & Sugars Inc.

This supplement to the 2nd edition [see preceding abstr.] contains solids tables at 20°C in vacuo and in air for sucrose, dextrose and total sugar. These tables are re-evaluated and expanded versions of those given on pp. 159-204 of the 2nd edition. JA

246

Sugar and chocolate confectionery. [Book]
Cakebread, S.
60pp. ISBN 0-19-859430-5 (1975) [13 ref. En]
London, UK; Oxford Univ. Press Price £1

This book appears in 'The value of food' series, which is under the general editorship of P. Fisher & A. E. Bender. It is intended for students and new entrants to the confectionery industry. Chapters included are: The ingredients (pp. 3-12); The types of confectionery (pp. 13-18); The manufacture of sugar confectionery (pp. 19-33); The manufacture and use of chocolate (pp. 34-43); The manufacture of chocolates (pp. 44-46); The manufacture of compound coatings (pp. 47-48); Colouring and flavouring; packing and storing (pp. 49-50); and Nutritional aspects (pp. 51-52). An appendix includes the following tables: Nutritional composition of plain, unsweetened chocolate; Composition of shelled, fresh cocoa bean; Composition of various sweets per 100 g; Composition of brown and white sugar; and sugar boiling temp. and tests. VJG

247

Sugars in nutrition. [Conference proceedings]
Sipple, H. L.; McNutt, K. W. (Editors)
xx + 768pp. ISBN 0-12-646750-1 (1974) [many ref. En] New York, USA & London, UK; Academic Press Inc. [Nutr. Foundation, New York, USA]

This book in the Monograph series of the Nutrition Foundation is based on papers presented at an international conference on sugars in nutrition held No. 8-11, 1972 at Vanderbilt University, School of Medicine, Nashville, Tennessee. Papers include: Sugar in history, by W. R. Aykroyd (pp. 3-9, 6 ref.); Present knowledge of sugars in nutrition - an overview, by W. J. Darby (pp. 11-16); Biochemistry of sweet sensation, by R. H. Cagan (pp. 19-36, 65 ref.); The psychology of sweetness, by H. R. Moskowitz (pp. 37-64, 31 ref.); Occurrence of various sugars in foosds, by R. S. Shallenberger (pp. 67-80, 16 ref.); World sugar production and usage in Europe, by A. Wretlind (pp. 81-92, 17 ref.); Level of use of sugars in the United States, by L. Page & B. Friend (pp. 93-107, 5 ref.); The chemistry and technology of sugars, by S. M. Cantor (pp. 111-125, 10 ref.); Current developments in industrial uses for sugars, by E. L. Mitchell (pp. 127-133); New carbohydrate sweeteners, by C. Aminoff (pp. 135-142, 26 ref.); Hydrolysis and absorption of carbohydrate, and adaptive responses of the jejunum, by R. H. Herman (pp. 145-172, 130 ref.); Adaptive effects of dietary sugars on intestinal disaccharidase activity in man, by N. S. Rosensweig (pp. 174-186, 43 ref.); [continued in following abstr.]. AL

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Sugars in nutrition. [Conference proceedings]
Sipple, H. L.; McNutt, K. W. (Editors)
xx + 768pp. ISBN 0-12-646750-1 (1974) [many ref. En] New York, USA & London, UK; Academic Press Inc. [Nutr. Foundation, New York, USA]

[Continued from preceding abstr.] Enzyme deficiency and malabsorption of carbohydrates, by A. Dahlqvist (pp. 187-214, 100 ref.); Effect of carbohydrates on intestinal flora, by P. György (pp. 215-226, 32 ref.); The metabolism of polyols, by O. Touster (pp. 229-239, 34 ref.); The metabolism of xylitol, by E. R. Froesch & A. Jakob (pp. 241-258, 12 ref.); Comparative metabolism of xylitol, sorbitol, and fructose, by H. Forster (pp. 259-280, 35 ref.); Metabolism of lactose and galactose, by R. G. Hansen (pp. 281-301, 72 ref.); The effects on metabolism of maltose and higher saccharides, by I. Macdonald (pp. 303-312, 35 ref.); Involvement of the raffinose family of oligosaccharides in flatulence, by E. Cristofaro F. Mottu, & J. J. Wuhrmann (pp. 313-336, 66 ref.); Inborn errors of carbohydrate metabolism, by H. G. Hers (pp. 337-356, 67 ref.); The metabolism and toxic effects of fructose, by L. Hue (pp. 357-371, 71 ref.); Cataractogenic effects of lactose and galactose, by J. H. Kinoshita (pp. 375-386, 20 ref.); Obesity, by G. Schettler & G. Schlierf (pp. 389-400, 30 ref.);

Sugars in cardiovascular disease, by F. Grande (pp. 401-437, 169 ref.); Influence of dietary fructose and sucrose on serum triglycerides in hypertriglyceridemia and diabetes, by E. A. Nikkila (pp. 439-448, 33 ref.); Pediatric diabetes, by M. Cornblath (pp. 451-467, 55 ref.); The sorbitol pathway in the nervous system, by K. H. Gabbay (pp. 469-482, 45 ref.); [continued in following abstr.]. AL

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Sugars in nutrition. [Conference proceedings]
Sipple, H. L.; McNutt, K. W. (Editors)
xx + 768pp. ISBN 0-12-646750-1 (1974) [many ref. En] New York, USA & London, UK; Academic Press Inc. [Nutr. Foundation, New York, USA]

[Continued from preceding abstr.] Experimental models of diabetes, by A. M. Cohen, A. Teitelbaum, S. Briller, L. Yanko, E. Rosenmann & E. Shafrir (pp. 483-511, 92 ref.); Adult diabetes, by O. B. Crofford (pp. 513-524, 5 ref.); Sugars in parenteral nutrition, by H. C. Meng (pp. 527-566, 71 ref.); Toxicity of parenteral xylitol, by D. W. Thomas, J. B. Edwards & R. G. Edwards (pp. 567-590, 40 ref.); The safety of oral xylitol, by M. Brin & O. N. Miller (pp. 591-606, 25 ref.); The renal metabolism and uses of mannitol, by H. E. Ginn (pp. 607-612, 31 ref.); Xylitol as a therapeutic agent in glucose-6-phosphate dehydrogenase deficiency, by J. van Eys, Y. M. Wang, S. Chan, V. S. Tanphaichitr & S. M. King (pp. 613-631, 31 ref.); Carbohydrates as a causative factor in dental caries: epidemiological evidence, by A. L. Russell (pp. 635-644, 46 ref.); Sugars and the formation of dental plaque, by K. K. Mäkinen (pp. 645-687, 143 ref.); and Carbohydrate metabolism in caries-conducive, oral streptococci, by A. T. Brown (pp. 689-719, 90 ref.). AL

250

[Colouring substances and their effect of quality of sugar.] Krasyashchie veshchestva i ihk vliyanie na kachestvo sakhara. [Book]
Sapronov, A. R.; Kolcheva, R. A.
346pp. (1975) [Ru] Moscow, USSR; Pishchevaya promyshlennost'. Price 2.70r

This book, comprising up-to-date knowledge of the nature, mechanism of formation and analysis of colouring substances originating during sugar production, is intended for students and research workers. It includes the following chapters: Decomposition of sucrose (pp. 5-32); Decomposition of monosaccharides (pp. 33-54); Characteristics of individual groups of colouring substances (pp. 55-113); Physico-chemical properties of colouring substances (pp. 114-144); Spectral properties and structure of colouring substances (pp. 144-167); Effects of different factors on conditions of formation of colouring substances (pp. 168-189); Technological properties of colouring substances (pp. 190-256); Quantitative detn. of individual groups of colouring substances in mixtures (pp. 257-278); and Instrumental methods for evaluation of sugar colour (pp. 279-298). STI

251

Starch and its components. [Book]
Banks, W.; Greenwood, C. T.
xi + 342pp. ISBN 0-85224-251-4 (1975) [17pp. of ref. En] Edinburgh, UK; Edinburgh University Press [Hannah Res. Inst., Ayr, UK]

This book presents a coherent picture of the fundamental aspects of starch chemistry and is based largely on work by the authors. Chapters are: Introduction (pp. 1-4); Fractionation of the starch granule, and the fine structures of its components (pp. 5-66); The reaction of starch and its components with iodine (pp. 67-112); The conformation of amylose in dilute solution (pp. 113-190); Starch-degrading enzymes (pp. 191-241); and The structure and biosynthesis of the starch granule (pp. 242-306). JA

252

[The determination of starch.] Die Bestimmung der Stärke. [Book]
Willigen, A. H. A. de
96pp. ISBN 3-489-72014-8 (1974) [many ref. De] Hamburg, Federal Republic of Germany; Verlag Paul Parey Price DM48

This book, number I-1 in the series 'Starch handbook in individual monographs' produced under the general editorship of M. Ulmann, contains the following chapters: Definition of starch from the analytical viewpoint (pp. 9-10); Methods suitable for various materials (pp. 11-39); Analysis of raw materials in the starch industry (pp. 40-53), including maize, potato, wheat, rye, barley, sweet potato and milo; Analysis of different plant parts (pp. 54-57); Analysis of manufactured products (pp. 58-77), which includes a section on foods; and Feeds, especially mixed feeds (pp. 78-81). A bibliography and author and subject indexes are included. [See FSTA (1975) **7** 1M130 & (1976) **8** 5L443 for V-4 and V-5 in the series.] JA

253

[The microscopy of starch granules.] Die Mikroskopie der Stärkekörner. [Book]
Czaja, A. T.
136pp. (1969) [many ref. De] Hamburg, Federal Republic of Germany; Verlag Paul Parey Price DM32

This book, number VI-1 in the series 'Starch handbook in individual monographs' produced under the general editorship of M. Ulmann, consists of 2 sections: General microscopy of the starch granules of plants (pp. 9-77); and Specific microscopy of the starch granules of plants (pp. 78-122). A bibliography and author and subject indexes are included. [See also preceding abstr.] JA

254

[Structure and formation of starch granules.] Struktur und Bildung des Stärkekorns. [Book]
Badenhuizen, N. P.
135pp. ISBN 3-489-74314-8 (1971) [many ref.

De] Hamburg, Federal Republic of Germany; Verlag Paul Parey Price DM32

This book, number VI-2 in the series 'Starch handbook in individual monographs' produced under the general editorship of M. Ulmann, contains the following chapters: Historical developments and general questions (pp. 9-11); Formation of starch granules in plant cells (pp. 11-54); Physiology and biochemistry of starch synthesis (pp. 54-68); Chemical and physical structural characteristics of starch granules (pp. 69-77); Submicroscopic structure of starch granules (pp. 77-80); The laminate structure of starch granules (pp. 80-84); The origin of starch granules (pp. 84-100); The 'corrosion' of starch granules (pp. 100-105); Environmental and hereditary factors (pp. 105-112); and Summary (pp. 113-116). A bibliography and a subject index are included. [See also preceding abstr.] JA

255

[Starch as an ion exchanger.] Die Stärke als Ionenaustauscher. [Book]
Winkler, S.
70pp. ISBN 3-489-74414-4 (1971) [many ref. De] Hamburg, Federal Republic of Germany; Verlag Paul Parey Price DM18.60

This book, number VI-3 in the series 'Starch handbook in individual monographs' produced under the general editorship of M. Ulmann, contains the following chapters: Introduction (p. 9); The starch granule as a natural ion exchanger (pp. 10-12); Bivalent cation exchange by starch (pp. 12-20); Starch as an electrolyte (pp. 20-21); Comparative rheological studies of the gelatinization characteristics of cations-starches (pp. 21-37); Ion exchange as a basis for quantitative analytical determinations (pp. 37-45); Cell-free starch (pp. 45-55); Ageing phenomena in starches in relationship to their cation content (pp. 55-60); Commercial applications of cationic starches (pp. 60-61); and Historical review (pp. 62-63). A bibliography and autor and subject indexes are included. [See also preceding abstr.] JA

256

[The biosynthesis of starch.] Die Biosynthese der Stärke. [Book]
Meisel, P.
146pp. ISBN 3-489-745-140 (1974) [many ref. De] Hamburg, Federal Republic of Germany; Verlag Paul Parey Price DM64

This book, number VI-4 in the series 'Starch handbook in individual monographs' produced under the general editorship of M. Ulmann, contains the following chapters: Photosynthesis (pp. 9-31); Starch and its precursors (pp. 32-37); The enzymic synthesis of starch and sucrose (pp. 38-109); and Prospects (pp. 110-111). A bibliography and author and subject indexes are included. [See also preceding abstr.] JA

257

[Fractionation of starch.] Die Fraktionierung der Stärke. [Book]
Ulmann, M.
154pp. ISBN 3-489-74814-X (1971) [many ref. De] Hamburg, Federal Republic of Germany; Verlag Paul Parey Price DM36

This book, number VII-1 in the series 'Starch handbook in individual monographs', contains the following chapters: Introduction (pp. 9-29); The characterization of amylose and amylopectin (pp. 30-35); Different fractionation methods (separation of amylose and amylopectin) (pp. 36-108); and The chromatographic separation of amylose and amylopectin and their simultaneous detection (pp. 109-131). A bibliography and author and subject indexes are included. [See also preceding abstr.] JA

258

[Analytical characteristics of amylose and amylopectin.] Analytische Kennzeichnung von Amylose und Amylopektin. [Book]
Ulmann, M.
68pp. ISBN 3-489-74914-6 (1973) [many ref. De] Hamburg, Federal Republic of Germany; Verlag Paul Parey Price DM28

This book, number VII-2 in the series 'Starch handbook in individual monographs', contains the following chapters: Introduction - the polysaccharide problem of starch (pp. 9-11); Differentiation of amylose and amylopectin (pp. 11-16); Methods for determination of end groups (pp. 16-31); Determining and assessing the purity of amylose on the basis of its iodine-binding capacity (pp. 31-44); Chromatographic methods of characterization (pp. 44-52); Enzymic methods of characterization (pp. 52-55); and The degree of polymerization of starch polysaccharides (pp. 56-59). A bibliography and author and subject indexes are included. [See also preceding abstr.] JA

259

[The rheology of starch.] Die Rheologie auf dem Stärkegebiet. [Book]
Schutz, R. A.
121pp. ISBN 3-489-75614-2 (1974) [many ref. De] Hamburg, Federal Republic of Germany; Verlag Paul Parey Price DM64

This book, number IX-1 in the series 'Starch handbook in individual monographs' produced under the general editorship of M. Ulmann, contains the following chapters: Basic principles of rheology (pp. 12-32); Rheometry (pp. 33-61); The rheology of very dilute solutions - physical-chemical characterization of starch (pp. 62-72); Paste production and gelatinization curves (pp. 73-85); Rheological behaviour of pastes (pp. 86-100); and The viscoelastic behaviour of starch paste (pp. 101-110). A bibliography and author and subject indexes are included. [See also preceding abstr.] JA

260

The role of sucrose in foods. [Book]
Lachmann, A.
ix + 279pp. (1975) [many ref. En] Bethesda, Maryland, USA; International Sugar Research Foundation Inc. Price $5.00

This book presents a comprehensive review of research, carried out over the last 30 yr by the International Sugar Research Foundation Inc., which attempted to elucidate the function of sucrose in foods and assess its influence on the quality of major food products. The book contains the following sections: The role of sucrose in bakery products (pp. 3-40, 72 ref.); The role of sucrose in beverages (pp. 41-62, 22 ref.), covering carbonated non-alcoholic beverages and non-carbonated alcoholic and non-alcoholic beverages; The role of sucrose in confectionery products (pp. 63-95, 46 ref.); The role of sucrose in Cottage cheese and ice cream (pp. 97-122, 37 ref.); The role sucrose in fruits and vegetables (pp. 123-236, 240 ref.); and The role of sucrose in meat products (pp. 237-253, 32 ref.). A glossary of relevant terms is appended. JA

CEREALS AND BAKERY PRODUCTS

261

[Improvement of technological processes at cereal processing plants.] Optimalizatsiya tekhnologicheskikh protsessov na zerno-pererabatyvayushchikh predpriyatiyakh. [Book]
Ostapchuk, N. V.
144pp. (1974) [many ref. Ru] Moscow, USSR; "Kolos". Price 0.39r

Principles necessary for achieving optimum organization and arrangement of technological processes at cereal storage and processing plants are dealt with. The book will prove useful to workers involved in flour milling, cereal storage and feed production and acquainted with the elements of mathematical modelling. The following chapters are included: Optimalization of technological processes at grain storage and processing plants (pp. 5-26); Optimalization of milling processes (pp. 26-46); Optimalization of blending and metering processes (pp. 46-84); Optimalization of grain drying processes (pp. 84-105); Optimalization of granulation processes (pp. 105-119); and Selection of the optimal number of machines and equipment (pp. 119-140). STI

262

[Enrichment of intermediate products at groat mills.] Obogashchenie promezhutochnykh productov na krupozavodakh. [Book]
Mel'nikov, E. M.
111pp. (1974) [38 ref. Ru] Moscow, USSR; "Kolos". Price 0.32r

The following chapters are included: Physical properties of hulled and unhulled grains (pp. 6-13); Methods of groat separation and operation of groat separating machines (pp. 13-27); Theoretical principles of the operation of groat separating machines (pp. 27-42); Groat separating machines (pp. 42-70); Methods for improving the efficiency of groat separating machines (pp. 70-88); Technological efficiency of groat separating machines (pp. 88-95); and Analysis of some currently used systems of groat separation (pp. 95-110). STI

263

Everyday productions of baked goods. [Book]
Barrows, A. B.
Ed. 2, ix + 396pp. ISBN 0-85334-560-0 (1975) [En] Barking, Essex, UK; Applied Science Publishers Ltd. Price £10 [Tameside Coll. of Tech., Ashton-under-Lyne, Lancs., UK]

This revised and up-dated 2nd edition is, like the 1st (published in 1958), intended for the baker and confectioner and the student. Included are full recipes and details (with photographs) of British, US, Canadian and European specialities. Quantities are given in both imperial and metric forms. Chapters are: Materials (pp. 1-6); Sponge goods (pp. 7-60); Powder-aerated goods (pp. 61-80); Short-paste goods (pp. 81-95); Sweetpaste and shortbread (pp. 96-162); Puff paste (pp. 163-190); Chou paste (pp. 191-199); Ginger goods (pp. 200-217); Cakes and cake-making (pp. 218-375); High speed mixing (pp. 376-379); and Some conclusions (pp. 380-384). JA

264

The technology of cake making. [Book]
Bennion, E. B.; Bamford, G. S. T.
Ed. 5, ix + 390pp. ISBN 0-249-44121-7 (1973) [many ref. En] Aylesbury, Bucks., UK; Leonard Hill Books Price £7.50

This revised 5th edition [4th edition published in 1966], containing new chapters on quality control and packaging, deals with the fundamentals of the technology of flour confectionery production. It covers raw materials, processes, plant and equipment, safety and hygiene, and legislation. Chapters are: Introductory (pp. 1-11, 10 ref.); Flour used in confectionery (pp. 12-21, 4 ref.); Moistening agents (pp. 22-27); Eggs and egg products (pp. 28-40, 7 ref.); Baking fats (pp. 41-59, 9 ref.); Sugars (pp. 60-75, 2 ref.); Chemical aeration (pp. 76-100, 26 ref.); Essences and essential oils (pp. 101-107, 2 ref.); Spices and flavourings (pp. 108-112, 2 ref.); Colouring matter (pp. 113-119); Nuts in confectionery (pp. 120-127, 2 ref.); Fruits used in confectionery (pp. 128-136); Jams and jellies (pp. 137-151, 2 ref.); Gums and jellying agents (pp. 152-163, 2 ref.); Chocolate (pp. 164-179, 9 ref.); Icings, fillings and glazes (pp. 180-197, 6 ref.); Fermented goods (pp. 198-206); Chemically aerated goods (pp. 207-213); Pastes (pp. 214-224, 4 ref.); Cake making processes (pp. 225-244, 8 ref.); Sponge goods (pp. 245-256, 11 ref.); Almond goods (pp. 257-266); Gateaux and fancies (pp. 267-278, 5 ref.); Baking of

confectionery goods (pp. 279-291, 5 ref.); Refrigeration in the bakery (pp. 292-297, 6 ref.); Bakery machinery and plant (pp. 298-319, 12 ref.); Nutritional value of flour confectionery (pp. 320-328, 1 ref.); Quality control (pp. 329-352, 2 ref.); and Packaging (pp. 353-376, 7 ref.). JA

265

Bread. Social, nutritional and agricultural aspects of wheaten bread. [Book]
Spicer, A. (Editor)
x + 358pp. ISBN 0-85334-637-2 (1975) [many ref. En] Barking, Essex, UK; Applied Science Publishers Ltd. Price £14.00

This book contains papers presented at a symposium organized by the Rank Prize Funds and held at Selsdon Park Hotel, Croydon, Surrey, UK [no date given]. The papers were: The history of wheat and bread, by A. Spicer (pp. 1-4); The sociology of bread, by M. Douglas (pp. 7-26, 13 ref.); Origins of wheat, by R. Riley (pp. 27-45, 38 ref.); The structure and biochemistry of the wheat grain, by K. Kingswood (pp. 47-65, 31 ref.); The crop, the environment and the genotype, by F. G. H. Lupton & F. M. Pushman (pp. 67-89, 27 ref.); The nutritive value of wheat proteins, by K. J. Carpenter (pp. 93-114, 73 ref.); Milling and baking quality, by G. N. Irvine (pp. 115-126, 1 ref.); Cultural, genetic and other factors affecting quality of wheat, by V. A. Johnson, P. J. Mattern & K. P. Vogel (pp. 127-140, 11 ref.); Wheat starch (structural aspects), by R. Angold (pp. 141-160, 11 ref.); Limitations to productivity by diseases and pests in the field - North America, by D. J. Samborski (pp. 163-170, 17 ref.); Limitations to productivity by diseases and pests in the field - Europe, by F. J. Moore (pp. 171-180, 29 ref.); Pre-harvest and post-harvest losses, by S. K. Majumder (pp. 181-199, 26 ref.); [continued in following abstr.] JA

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Bread. Social, nutritional and agricultural aspects of wheaten bread. [Book]
Spicer, A. (Editor)
x + 358pp. ISBN 0-85334-637-2 (1975) [many ref. En] Barking, Essex, UK; Applied Science Publishers Ltd. Price £14.00

[Continued from preceding abstr.] Crop nutrition and soil fertility: some effects on yield and quality of English wheat, by G. W. Cooke (pp. 201-208, 5 ref.); Plant diseases and nutritive value, by D. A. Doling (pp. 209-215, 10 ref.); Extraction rates - milling processing implications, by P. W. R. Eggitt & A. W. Hartley (pp. 219-233, 19 ref.); Extraction rates - nutritional implications, by E. M. Widdowson (pp. 235-246, 25 ref.); The fortification of flour, by G. A. H. Elton (pp. 249-257, 7 ref.); Advances in breadmaking technology, by N. Chamberlain (pp. 259-272, 21 ref.); Wheat agronomy - North America, by E. G. Heyne (pp. 275-283, 14 ref.); Wheat agronomy - the Netherlands, by J. Mesdag (pp. 285-291); Wheat agronomy in Australia, by W. V. Single (pp. 293-302, 25 ref.); Wheat agronomy in India, by M. V. Rao (pp. 303-316); Wheat agronomy in France, by J. Hebert (pp. 317-329, 1 ref.); and Concluding remarks, by K. L. Blaxter (pp. 339-350). Discussions of each paper and a general discussion (pp. 331-335) are included. JA

267

Doughs and baked goods. Chemical, air, and non-leavened. [Book]
Renzo, D. J. de
Food Technology Review, Noyes Data Corporation
No. 26, xii + 435pp. ISBN 0-8155-0590-6 (1975) [En] New Jersey, USA; Noyes Data Corporation Price $36

This book is based on US patents relating to commercial baking techniques not employing yeast. It supplies detailed technical information and can be used as a guide to the US patent literature in this field. The information is arranged under the following headings: Chemically leavened products (including manufacturing processes, cake mixes, cake mix additives, cake ingredient substitutes, cookies, cake doughnuts, bread, biscuits, pancakes and waffles) (pp. 2-108); Air leavened products (including Angel food cake and premixes, souffle premixes, cream puffs, egg white substitutes, no-bake cake products) (pp. 109-141); Non-leavened products (including pie doughs, pies, puff pastry, tortillas, batter and breading compositions) (pp. 142-193); Refrigerated and frozen products (biscuit doughs, cake batters, non-leavened pastry, cakes, cake mixes and batters) (pp. 194-253); Leavening agents (pp. 254-273); Shortening composition (pp. 274-324); Emulsifiers (pp. 325-357); Preservation methods (pp. 358-375); Flavouring processes (pp. 376-405); and Fillings, toppings and and coatings (pp. 406-429). Company, inventor and patent number indexes are included. VJG

268

[Effect of different methods of dough preparation on bread quality.] Vliyanie razlichnykh sposobov testoprigotovleniya na kachestvo khleba. [Book]
Grishin, A. S.; Enkina, L. S.
111pp. (1974) [Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.30r

This book contains the following chapters: Comparison of different methods of dough preparation (pp. 5-16); Effects of technological parameters in dough preparation on product quality (pp. 17-21); Quality of bread in relation to the content of flour in semi-manufactured products (pp. 22-27); Effects of intensification of the dough preparation process on bread quality (pp. 28-67); Effects of complex mechanization of the dough preparation process on bread quality (pp. 68-85); Improvement of bread quality by applying various additives to the dough (pp. 86-99); and Retention of the freshness of bread (pp. 100-108). STI

269

Rice. [Book]
Grist, D. H.
Ed. 5, xxvii + 601pp. ISBN 0-582-46665-2 (1975) [many ref. En] London, UK; Longman Group Ltd. Price £15.00

This 5th edition (4th edition published in 1965) of the book, a volume in the Tropical Agriculture Series, consists of 3 parts, Oryza sativa Linn.: the plant (pp. 1-135); Paddy: production (pp. 137-382); and Rice: the product (pp. 383-511), each part containing several chapters. Chapters are: The history and origin of rice (pp. 3-10); Climate and soils (pp. 11-36); Water supply and control (pp. 37-61); Characteristics of the plant (pp. 62-91); Varieties and their classification (pp. 92-107); The genetics of rice, by D. Rhind (pp. 108-117); Improvement by selection and breeding (pp. 118-135); Methods of cultivation (pp. 139-178); Cultivation of dryland paddy (pp. 179-196); Mechanized cultivation (pp. 197-239); Fertilizers and manures (pp. 240-276); Weeds (pp. 277-294); Fish production in paddy fields (pp. 295-310); Pests (pp. 311-339); Diseases (pp. 340-382); Storage of paddy and rice (pp. 385-405); Milling and parboiling (pp. 407-431); Rice products (pp. 432-448); Nutritional value of rice (pp. 449-472); and The economics of rice production (pp. 473-511). [Continued in following abstr.] JA

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Rice. [Book]
Grist, D. H.
Ed. 5, xxvii + 601pp. ISBN 0-582-46665-2 (1975) [many ref. En] London, UK; Longman Group Ltd. Price .00

[Continued from preceding abstr.] The book also contains the following appendices: Testing seed paddy for purity by the sequential analysis method (pp. 513-515); The scope and work of the International Rice Commission (pp. 516-517); Standardization of rice terminology (pp. 518-520); Weights and measures: conversion factors (pp. 521-524); Specimen field and laboratory record cards for rice selection work (pp. 525-531); Species of rice (pp. 532-533); and Old and new names of countries (p. 534). A bibliography (pp. 535-570) is included. JA

271

Literature investigation into the dust explosion danger in industries storing and processing cereals and flour. [Book]
Gooijer, H. de; Groothuizen, T. M.; Reinders, M. E.
103pp. (1975) [many ref. En] PO Box 45, Rijswijk 2100, Netherlands; TNO Bureau Explosieveiligheid Price £16; $30 [Tech. Lab. TNO, Rijswijk, Netherlands]

This literature survey is intended to assist in the establishment of directives and recommendations relating to measures for reducing the risk of dust explosions in industries handling cereals and flours. Chapters are: General properties of dust explosions (pp. 7-31, 23 ref.); Survey of explosive properties of substances most applied (pp. 32-36); Literature search into dust explosions that occurred (pp. 37-46, 21 ref.); and A literature study into directives and recommendations to reduce the explosion hazards in industries that store or process cereals and flour (pp. 47-62, 13 ref.). Addenda (pp. 63-103) classify dust explosions that have occurred since 1860 by cause, material and machinery involved, type of industry and country, and give brief descriptions of 19 explosions. JA

272

Rice Report, 1975. Annual report of world research and development on the post-harvest utilization of rice. [Book]
Barber, S.; Mitsuda, H.; Desikachar, H. S. R. (International Union of Food Science & Technology) (Editors)
xxiv + 179pp. ISBN 84-00-04248-4 (1975) [many ref. En] Jaime Roig, 11. Valencia 10, Spain; Instituto de Agroquimica y Tecnologia de Alimentos

The Rice Report, of which this is the first annual volume, is sponsored by the International Union of Food Science & Technology (IUFoST) and subsidized by the Instituto Agroquimica y Tecnologia de Alimentos (Valencia, Spain). It constitutes the major activity of the IUFoST Working Party on Rice Utilization which was established in 1973 and provides information on the scientific and technical activities of centres and organizations involved in the post-harvest utilization of rice. It is intended that the Rice Report will cover the following aspects: recent research results, areas presently under investigation, relevant papers published during the preceding yr, developments within the rice industry, and current activities of national and international organizations in the field of rice research and industry. This first issue contains reports from Australia, FAO, France, Guatemala, Hungary, India, Japan, Korea, Liberia, OAS (Organization of American States), Philippines, Singapore, Spain, Sri Lanka, Thailand, UK and USA. Generally, the reports consist of summaries of recent research projects with details of related published work. JA

273

[The maize industry.] L'industria del mais. [Book]
Cinquetti, M.
449pp. (1972) [72 ref. It] Pinerolo, Italy; Chiriotti Editori Price £5.50 [London, UK; Food Trade Press]

This well produced, illustrated book covers all aspects of the maize industry, and includes the following chapters: The history of maize (pp. 17-27); The position of maize in agriculture (pp. 29-45); Marketing of maize (pp. 47-59); Silos (pp. 61-75); Mechanization of silos (pp. 77-93); Precleaning machines (pp. 95-108); Metal silos in reinforced concrete (pp. 109-119); Technology of maize ensilage (pp. 121-128); Determination of factors causing changes in maize in silos (pp. 129-140);

Ventilation (pp. 141-155); Drying (pp. 157-173); Disinfection (pp. 175-188); Review of maize utilization (pp. 189-198); Cleaning (pp. 199-211); Grinding in roller mills (pp. 213-232); Grinding in tower mills (pp. 233-240); Dry degermination (pp. 241-256); Partial wet degermination (pp. 257-266); The maize germ (pp. 267-276); Maize oil and its manufacture (pp. 277-288); Maize flakes (pp. 303-315); Chemical composition of maize flour (pp. 341-350); Maize bread, biscuits and chapattis (pp. 351-360); Polenta flour (pp. 361-372); Production of maize products (pp. 373-384); Corn flakes (pp. 385-391); Maize pasta (pp. 393-399); Fuba (pp. 401-411); Maize in brewing (pp. 413-426); Maize in distillation of alcohol (pp. 427-434); Maize and starch production (pp. 435-441); and Maize tutoli flour (pp. 443-446). HBr

274

[Advances in automation of grain processing plants.] Novoe v avtomatizatsii zernopererabatyvayushchikh predpriyatii. [Book]
Moskalenko, A. I.
181pp. (1974) [Ru]

The book is intended for those involved in automation of processes during storage and processing of grain and production of feeds. It contains the following chapters: New tools of automation (pp. 5-59) which discusses sensors for measuring and controlling levels of grain and milling products, moisture content, etc.; Systems for automatic control of technological processes in the milling industry (pp. 60-103) which covers automatic systems for regulation of grinding, wetting of grain, bleaching and pneumatic transport; and Systems for automatic control of technological processes in production of feeds (pp. 104-180). STI

275

[Technological efficiency of grain processing equipment.] Tekhnologicheskaya effectivnost' oborudovaniya zernopererabatyvayushchei promyshlennosti. [Book]
Vainberg, A. A.; Kotlyar, L. I.
238pp. (1975) [Ru] Moscow, USSR; "Kolos" Price 0.68r

This book, intended for students at agricultural schools, and specialists and technicians working in the grain processing industry, includes the following chapters: Statistical-probability system for control of technological efficiency of equipment operation and industrial processes (pp. 9-35); Basic principles of statistical methods for control of technological processes and quality of production (pp. 36-50); Metrological principles of control of technological efficiency of equipment and processes (pp. 51-57); Statistical methods for data processing (pp. 58-68); Control and regulation of technological efficiency of operation of equipment in mills (pp. 69-81); Productivity of equipment (pp. 82-90); Detn. of efficiency of operation of equipment for cleaning grain and preparing it for milling (pp. 91-111); Methods for detn. of efficiency of operation of milling and separation machinery (pp. 112-121); Control and regulation of continuous flour bleaching (pp. 122-126); Examination of equipment (pp. 127-142); System for controlling technological efficiency of equipment operation and processes (pp. 143-160); Analysis of technological efficiency of equipment operation and processes (pp. 161-190); Automatic system for directing technological processes in flour milling plants (pp. 191-197); Methods for detn. of components of milled grains (pp. 198-212); and Statistical methods for evaluation of quality of production and equipment (pp. 213-224). STI

276

[Physico-chemical principles of flour production technology.] Fiziko-khimicheskie osnovy tekhnologii proizvodstva muki. [Book]
Aizikovich, L. E.
239pp. (1975) [Ru] Moscow, USSR; "Kolos" Price 0.90r

This book is intended for specialists in the milling industry; it includes the following chapters: Physical and thermophysical properties of grain influencing the process of milling (pp. 7-23); Chemical, mechanical and technological properties of wheat grain determining selection of a method for preparation and milling of grain (pp. 24-36); Removal of contaminating materials from grain, and changes of grain properties during preparation for milling (pp. 37-94); Changes of physical properties of products on milling of wheat (pp. 95-137); Changes of chemical properties of products on milling of wheat (pp. 138-164); Biochemical properties of wheat flour (pp. 165-183); Biological importance of production of flour enriched with synthetic vitamins and proteins (pp. 184-193); Storage of flour as a factor important for improvement of its baking properties (pp. 194-200); Baking properties of flour in relation to its physico-technological and biochemical properties (pp. 201-213); and Prospects for further developments of technologies of flour production (pp. 214-233). STI

277

[Groat concentrates ready for use without cooking.] Krupyanye kontsentraty, ne trubuyushchie varki. [Book]
Genin, S. A.; Dmitrieva, E. T.; Kaurtseva, I. V.; Toropova, T. N.
167pp. (1975) [Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 0.47r

This publication, intended for technicians working in the grain processing industry, deals with the problems concerning production of various kinds of ready-to-use food concentrates. It includes the following chapters: Basic technological principles of production of ready-to-use food concentrates (pp. 7-46); Single- and multicomponent concentrates of ready-to-use meals (pp. 47-86); Concentrates ready to use in the dry state (pp. 87-125); Retail packaging and storage

(pp. 126-144); and Control of production (pp. 145-167). STI

FATS, GLYCERIDES, LIPIDS, OILS

278

[Extraction and processing of edible fats.] Gewinnung und Verarbeitung von Nahrungsfetten. [Book]
Baltes, J.
255pp. ISBN 3-489-78914-8 (1975) [many ref. De] Berlin (West): Verlag Paul Parey

This book includes the following sections: Statistics of production, consumption, imports and exports of fats and oils (pp. 12-23); Basic lipid chemistry (pp. 24-75); The main edible fats and their sources (pp. 76-114); Extraction of fats and oils (pp. 114-114); Processing of crude fats and oils (pp. 144-218); Manufacture of special fats and fat preparations (pp. 218-244); and General hygienic and environmental requirements (pp. 245-247). A 2-page bibliography and a 6-page subject index are included. AJDW

279

[The chemistry of fats.] Khimiya zhirov. [Book]
Bezzubov, L. P.
279pp. (1975) [Ru] Moscow, USSR; Pishchevaya promyshlennost'. Price 0.72r

This book is intended as a textbook for students of food technolohy. It includes 2 parts: Chemistry of lipids, fat substitutes and surface active agents; and Technical indexes of fats and methods for their evaluation. Chapters included are: Fatty acids of natural fats and waxes (pp. 10-44); Fatty acids replacers (pp. 45-52); Glycerol (pp. 53-69); Glycerides (pp. 70-80); Higher fatty alcohols (pp. 81-92); Natural waxes (pp. 93-98); Chemical changes of fats and oils during storage and industrial processing (pp. 99-117); Substances accompanying fats (pp. 118-132); Natural fats (pp. 133-170); Surface active agents (pp. 171-194); Qualitative evaluation of fats and oils (pp. 195-199); Chemical indexes of fats (pp. 200-224); Physical indexes of fats (pp. 225-260); New physical and physico-chemical methods for evaluation of fats (pp. 261-268); and Exercises in evaluation of lipid composition (pp. 269-279). STI

280

[Analysis of edible fats.] Analyse der Nahrungsfette. [Book]
Pardun, H.
16, 376pp. ISBN 3-489-78814-1 (1976) [many ref. De] Hamburg, Federal Republic of Germany; Verlag Paul Parey Price DM98

This detailed textbook of fat analysis (vol. 16 of the series 'Grundlagen und Fortschritte in der Lebensmitteluntersuchung und Lebensmitteltechnologie') is divided into 2 sections: General methods (pp. 14-250); and Special fat analyses (pp. 251-324). Individual chapters are: Detn. of the fat content of raw materials and foods (pp. 14-23); Extraction of large quantities of fat for detailed investigation (pp. 23-25); Qualitative tests (pp. 25-31); Physical test methods (pp. 32-85); Chemical characteristics (pp. 85-97); Special methods for fat analysis (pp. 98-136); Detn. of the main constituents (pp. 136-157); Detn. of minor constituents, additives and contaminants (pp. 157-218); Testing for spoilage (pp. 218-251); Investigation and identification of vegetable fats (pp. 251-276); Investigation and identification of animal fats (pp. 276-285); Hydrogenated fats (pp. 285-289); Interesterified fats (pp. 289-292); Fractionated fats (pp. 292-293); Special fats for baking and deep-fat frying (pp. 293-303); Margarine (pp. 304-314); Mayonnaise and salad dressings (pp. 314-324); and Fats for use in animal feeds (pp. 324-325). Tables of values for various physicochemical properties of oils and fats are given in an appendix (pp. 325-333). An 8-page bibliography of books, a 24-page bibliography of journal references and a 9-page subject index are also included. AJDW

MILK AND DAIRY PRODUCTS

281

Antibiotics and milk. A contribution to the evaluation and solution of a problem. [Book]
Mol, H.
xii + 208pp.; viii + 123pp. (1975) [many ref. En] Rotterdam, Netherlands; A. A. Balkema Price F37.50, $15 [Food Inspection Service, Utrecht, Netherlands]

This comprehensive study, presented as a thesis at the Rijksuniversiteit, Utrecht, covers all aspects of the problem of antibiotic residues in milk, including the chemical composition, side effects and excretion time of antibiotics, their detrimental effects for the dairy industry, their use as preservatives for dairy products, their occurrence in milk in the Netherlands and elsewhere, the legal position in W. Europe and the USA, methods of antibiotic assay, and the quantitative interpretation of assay results. The 1st part of the book (pp. 1-208) is based mainly on a review of the literature; it has 2 appendices, the 1st containing statistical tables and the 2nd enumerating the references, jurisprudence and legislation cited. The supplement (pp. 209-331, containing Chapters 10 to 21, together with appended graphs, tables and references) gives results of experimental work on various problems (factors affecting sensitivity, accuracy, reliability and simplicity of plate inhibition tests; sensitivity of test organisms for antibiotics in milk; antibiotic residues in Dutch farm milk and market milk; causes of failure to prevent delivery of farm milk containing antibiotic residues; the extent of antibiotic therapy on dairy

cattle in the Netherlands; acceptable precautions in antibiotic treatment of dairy cattle; use of short-acting and long-acting preparations for intramammary infusion; and use of preparations for general application). ADL

282

Milk farming. [Book]
Oosthuizen, S. A.
292pp. (1975) [En] Potchefstroom, S. Africa; S. A. Oosthuizen Price R8.00 [190 Kruger Street, Potchefstroom, 2520, S. Africa]

This book, distributed by the author, has been written for farmers and junior students of agriculture. The author has endeavoured to write in the language commonly used by students. The book comprises 65 chapters, generally fairly short, each of which can be readily understood without reading the others. Some examples of chapter headings are: What is feeding value? Why do feeds differ? Can feeding lower the butterfat test? Any relationship between low fat and off flavours? Can urea be rendered safe for cows? Does poultry manure have feed value? Silage, when and how? How much protein in the concentrate? Should cows be steamed up? Should commercial dairy farmers practice inbreeding or outbreeding? ADL

283

[Physico-chemical principles of butter manufacture from high-fat cream.] Fiziko-khimicheskie osnovy proizvodstva masla iz vysokozhirnykh slivok. [Book]
Gulyaev-Zaitsev, S. S.
135pp. (1974) [Ru] Moscow, USSR; Izdatel'stvo Pishchevaya Promyshlennost'

The book is divided into 6 chapters dealing with the composition of butter and milk fat, including flavour substances; high-fat cream as a concentrated emulsion, covering fat globule membrane and effect of mechanical treatment on the stability of high-fat cream; phase conversions in milk fat (polymorphism of glycerides, solidification and melting of milk fat of different triglyceride composition and under static conditions composition and hardening of milk fat in the dispersed state and during mechanical treatment); structure formation in milk fat; processes of butter formation, including transformation of high-fat cream into butter, structure formation and consistency of butter and technological parameters of butter formation; and technological regimes of butter manufacture on a plant with an output of 1000 kg butter/h. References covering 10 pages are given separately for each chapter. FL

284

[Handbook of cheese. Cheeses of the world from A to Z. An encyclopedia.] Handbuch der Käse. Käse der Welt von A-Z. Eine Enzyklopädie. [Book]
Mair-Waldburg, H.
xiv + 902 pp. (1974) [many ref. De] Kempten (Allgäu), Federal Republic of Germany; Volkswirtschaftlicher Verlag GmbH. Price DM246

This book written with the collaboration of experts in many countries gives an extensive coverage of all aspects of cheese and cheese production. It is divided into 2 sections. Major chapters in section A (pp. 1-262) include: History of cheesemaking from antiquity to modern times; cheese in the literature; cheese as foodstuff; manufacture, trade and consumption of cheese; Alpine cheesemaking; definition and types of cheese; legal regulations and standards in different countries; Code of Principles for Milk and Milk Products; international cheese standards of the FAO/WHO; treatment and coagulation of cheese milk; processing and handling of curd and cheese; modern cheese technology; ancillary materials; packaging; and mechanical packaging of cheese. Section B (pp. 263-856), entitled 'Cheeses of the world from A to Z', lists individual varieties in alphabetical order with descriptions of their characteristics and manufacturing procedures, and include separate accounts of cheese produced in selected countries. An alphabetical list is given of names of cheeses quoted in literature (of mainly older date) which differ from the recognized terms. An appendix of 'cheese tables' gives information on the shape, size, weight and composition of individual cheese varieties, grouped according to type. The book contains numerous references and is very well illustrated. FL

285

Milk and milk products balances in OECD member countries 1960-1973. Bilans du lait et des produits laitiers dans les pays membres de l'OCDE 1960-1973. [Book]
Organization for Economic Cooperation & Development
162pp. ISBN 92-64-01323-9 (1975) [En, Fr] Paris, France Price 28.00F, £2.80, $7.00

This vol., the 4th in the series, is arranged in 2 parts: "General Tables", each of which covers a specific topic for each OECD member state, with group totals; and "Country Tables", with a series of tables (6 pp.) for each OECD member state. [See FSTA (1975) 7 11D295 for previous vol., covering 1959-1972.] HBr

286

[Biochemistry of milk and dairy products.] Biokhimiya moloka i molochnykh produktov. [Book]
Ovchinnikov, A. I.; Gorbatova, K. K.
259pp. (1974) [459 ref. Ru] Leningrad, USSR; Izdatel'stvo Leningradskogo Universiteta Price 1.67r

Detailed information on biochemistry of milk is presented in the book with respect to the present knowledge reflected in the world literature. The book is for scientific workers and technicians engaged in dairying. The following chapters are included: Milk constituents (pp. 8-117); Physicochemical properties of milk (pp. 117-137); Biosynthesis of milk constituents and various

factors affecting it (pp. 137-153); Biochemical changes in milk constituents (pp. 153-188); Biochemical processes in fermented milk products (pp. 188-196); and Principal biochemical processes in cheeses. STI

287

[Apparatus and technical equipment in the dairy industry.] Aparatura i urzadzenia techniczne w przemysle mleczarskim. [Book]
Garbunowski, J.; Dobrowolski, W.
293pp. (1974) [25 ref. Pl] Warsaw, Poland; Wydawnictwa Szkole i Pedagogiczne. Price 19zl

This is a handbook for students of secondary schools specialized in dairying. The following chapters are included: general information on dairy machinery; transportation in the dairy industry; measuring and control apparatus; milk tanks, can and bottle washing machines; separators; heat exchangers; milk filling machines; butter making machines; cheese making equipment; homogenizers, presses and cheese mills; ice cream processing machinery; milk driers; cheese processing equipment; cooling machines; ventilation and air conditioning; water pumps and water treatment plant; effluent purification equipment; mechanization and automation; care of machines and equipment and repairs. STI

288

[Space travel in the Milky Way.] Ruimtevaart in de melkweg. [Book]
Mulder, H.
25pp. (1975) [22 ref. Nl] Wageningen, Netherlands; Landbouwhogeschool

This illustrated booklet contains the text of a talk given by the author on his retirement from the chair of dairy production and science at the Agricultural University of Wageningen on 16 Sept. 1975. He invites his audience to imagine themselves inside a suitable space ship (e.g. a milk fat globule or a casein micelle) and join him on an expedition through the 'Milky way'. By means of this analogy he explains the structure and composition of milk and the way it is affected by technological processes such as churning. The analogy is used to illustrate, for example, what happens when the fat globule 'space capsule' meets another fat globule or an air bubble. ADL

289

[Rennet and rennet substitutes.] Presure et succedanes de presure. [Book]
Boudier, J. F.
83pp. (1974) [Fr] Massy, France; Centre de Documentation Internationale des Industries Utilisatrices des Produits Agricoles

This illustrated book deals with the various types of rennet substitutes (of animal, vegetable and microbial origin), their proteolytic activity, and their technological and organoleptic effects. The identification of the enzymes is discussed, and there is a general introductory chapter on cheesemaking and the mode of action of rennet. ADL

290

[National Milk Annual.] Annuaire National du Lait. [Book]
Anon.
Ed. 25, vi + 692pp. (1975) [Fr] Paris, France; Les Editions Comindus

This comprehensive directory on the French dairy industry consists of 4 parts. Part I deals with national professional organizations, legislation, dairy education, and labelling of cheese; part II deals with production and processing (listing local professional organizations, and processors arranged alphabetically and by product); part III gives an index of suppliers to the dairy industry; and part IV lists agents; wholesalers, exporters, etc. [See FSTA (1972) 4 10P1526 for a previous issue.] FL

291

[Principles of technical microbiology in dairying.] Osnovy tekhnicheskoi mikrobiologii molochnogo dela. [Book]
Korolev, S. A.
344pp. (1974) [many ref. Ru] Moscow, USSR; Pishchevaya Promyshlennost Price 3.12r

The book includes the following chapters: Morphology and classification of microorganisms common in dairy products (pp. 9-16); Physiology and biology of microorganisms in milk and dairy products. Classification of individual groups taking part in the main processes in dairying (pp. 16-85); Microbiology of market milk (pp. 85-166); Microbiology of fermented milk products (pp. 166-186); Buttermaking microbiology (pp. 186-257); Cheesemaking microbiology (pp. 257-326); and Microbiology of canned dairy products (pp. 326-335). STI

292

Selected bibliography on chesse. [Book]
United Kingdom, Ministry of Agriculture, Fisheries & Food
5pp. (1974) [En] London, UK [Great Westminster House, Horseferry Road, London SW1P 2HE, UK]

This list of ref. is divided into 2 sections: A, 17 ref. on general studies and surveys; and B, 50 ref. on manufacture, technology and processing. This bibliography is numbered as Library Bibliographies, No. 18. MC

293

[Practical handbook of cheesemaking.] Praktikum syrarske vyroby. [Book]
Havlicek, Z.
272pp. (1975) [Cs] Prague, Czechoslovakia; SNTL Price 32Kcs

This book is intended for foremen and technicians in cheese factories and for students in

specialized schools of the dairy industry. It includes the following chapters: Cheesemaking generally (pp. 31-59); Hard cheeses (pp. 59-103); Semi-hard cheeses of Edam type (pp. 104-138); Soft cheeses (pp. 139-168); Mould-ripened cheeses (pp. 169-192); Cheeses of Cheddar type (pp. 193-211); Cheeses of Tilsit type (pp. 212-219); Soviet cheeses (pp. 220-233); Pickled cheeses (pp. 234-242); Cream cheeses (pp. 244-253); Production of curd (pp. 254-259); Whey (pp. 260-261); and Organization of work in cheese factories (pp. 262-266). STI

294

[Use of nisin in cheese manufacture.] Verwendung von Nisin bei der Käseherstellung. [Book]
Lipinska, E.; Gudkow, A. W.; Karlikanowa, S. N.
103pp. (1976) [many ref. De] Leipzig, German Democratic Republic; VEB Fachbuchverlag Price M5.80

This is a translation of a Russian book published by Izdatel'stvo Pishchevaya Promyshlennost' (Moscow) in 1972. It contains the results of joint research by the USSR All-Union Institute for the Butter, Oil and Cheese Industry and the Polish Dairy Industry Institute. It examines the properties of nisin, its possible applications in cheesemaking, methods for determining its activity, and research results concerning the suppression of butyric acid bacteria in different types of cheese (including processed cheese). It is clearly shown that use of nisin cultures does not impair cheesemaking processes but increases their reliability. The book includes a 3-page subject index. ADL

295

[Animal and microbial rennets.] Syridla zivocisna a mikrobialni. [Book]
Teply, M.; Masek, J.; Havlova, J.
287pp. (1976) [many ref. Cs, ru, de, en, fr] Prague, Czechoslovakia; SNTL - Nakladatelstvi Technicke Literatury Price Kcs30

This book covers the history of rennets and their use in cheesemaking present problems of rennet production, development of rennet substitutes, properties, stability and coagulating and proteolytic activities of the various rennet enzymes, technological aspects of the production and use of animal and microbial rennets, preparation of rennet in vivo (using fistulae introduced into the calf's abomasum), use of vegetable rennets, and control of rennet quality. There is a 5-page subject index. ADL

296

[Cheese - its nutritive and sensoric properties, kinds and possibilities of use.] Kniga o syre, o ego pitatel'nykh i vkusovykh svoistvakh, mnogoobrazii assortimenta i sposobov potrebleniya. [Book]
Begunov, V. L.
215pp. (1974) [Ru] Moscow, USSR; Pishchevaya Promyshlennost'. Price 0.75r

This book gives basic information on nutritive value, flavour and culinary uses of over 100 different varieties of cheese produced in the USSR and other countries. It includes the following chapters: History of cheesemaking (pp. 9-15); Cheese in the USSR (pp. 16-24); Cheese in other countries (pp. 25-71); Consumers manual - characteristics of individual cheese types and possibilities of their proper use (pp. 73-150); Sale and storage of cheese (pp. 151-157); Foods from cheese (pp. 158-206 - giving numerous recipes, Soviet and international, including cheese salads, sauces and soups). STI

297

[Intensification of manufacture and improvement of the quality of cheese.] Intensifikatsiya proizvodstva i uluchshenie kachestva natural'nykh syrov. [Conference proceedings]
Alekseeva, M. A.; Matveeva, E. K. **(Union of Soviet Socialist Republics**, Altaiskoe Kraevoe Pravlenie NTO Pishchevoi Promyshlennosti; **Union of Soviet Socialist Republics**, Altaiskii Filial Vsesoyuznogo Nauchno-issledovatel'skogo Instituta Maslodel'noi i Syrodel'noi Promashlennosti) (Editors)
433pp. (1974) [Ru] Barnaul, USSR; Altaiskii TsNTI Price 0.50r

This publication contains brief accounts of papers for the symposium including: Changes in the composition of milk on inclusion of trace elements into the diet of cows, by T. A. Ostroumova & N. R. Yur'ev (pp. 21-22); Features of the manufacture of Suluguni cheese, by A. V. Piranishvili (pp. 117-119); Cheddarization of curd in Suluguni cheese manufacture, by A. V. Piranishvili (pp. 120-121); Intensification of cheese pressing through application of vibrations, by A. S. Arutyunyan, P. F. Krasheninin & V. P. Tabachnikov (pp. 143-144); Perforated moulds for cheese pressing without cloth manufactured in the USSR, by A. V. Onopriiko, (pp. 145-146); A method for the determination of adhesion of curd grains, by V. S. Ilyushkin & V. P. Tabachnikov (pp. 192-193); Controlling the readiness of curd for moulding using instruments, by V. P. Tabachnikov, V. S. Ilyushkin & E. Ya. Borkov (pp. 194-196); The role of temperature in the control of cheese consistency by instruments, by Z. Kh. Dilanyan, G. G. Khachatryan & V. P. Tabachnikov (pp. 197-199); Determination of cavities in cheese, by A. A. Maiorov (pp. 200-203); Concentration of production as a means of decreasing labour requirements, by Ya. M. Zybin & Ya. Ya. Shtaudinger (pp. 220-222). [Continued in following abstr.] FL

298

[Intensification of manufacture and improvement of the quality of cheese.] Intensifikatsiya proizvodstva i uluchshenie kachestva natural'nykh syrov. [Conference proceedings]
Alekseeva, M. A.; Matveeva, E. K. **(Union of Soviet Socialist Republics**, Altaiskoe Kraevoe Pravlenie NTO Pishchevoi Promyshlennosti; **Union**

of Soviet Socialist Republics, Altaiskii Filial Vsesoyuznogo Nauchno-issledovatel'skogo Instituta Maslodel'noi i Syrodel'noi Promyshlennosti) (Editors)
433pp. (1974) [Ru] Barnaul, USSR; Altaiskii TsNTI Price 0.50r

[Continued from preceding abstr.] Molecular biological approach to the taxonomy of thermophilic streptococci, by A. G. Grinevich, E. L. Tauson & L. T. Ermakova (pp. 235-237); Study of some properties of lactic streptococci in connection with the selection of starters for Imeretinskii cheese, by D. G. Chincharauli & M. S. Umanskii (pp. 244-245); Effects of antibiotics on the growth of lactic streptococci and coliforms in milk, by I. I. Sukhotskene, A. A. Matulite & I. I. Stasaitite (pp. 277-278); Some modifications of the diffusion method for the determination of lipolytic activity of bacteria in application to lactic acid and propionic acid microorganisms, by Yu. A. Borovkova, A. N. Belov, M. S. Umanskii & I. P. Anishchenko (pp. 291-292, 2 ref.); Effect of some trace elements on acid production and proteolytic activity of Sovetskii cheese starters and their microflora, by Z. Kh. Dilanyan & V. M. Ovasanyan (pp. 303-305); Oxidation-reduction potential of starters for small cheeses, by Yu. A. Dudenkov & L. G. Kirillova (pp. 312-315); Improving methods of microbiological control in cheesemaking, by S. N. Karlikanova, E. N. Kuchinskaya & V. A. Krapivina (pp. 341-344). [Continued in following abstr.] FL

299

[Intensification of manufacture and improvement of the quality of cheese.] Intensifikatsiya proizvodstva i uluchshenie kachestva natural'nykh syrov. [Conference proceedings]
Alekseeva, M. A.; Matveeva, E. K. (**Union of Soviet Socialist Republics**, Altaiskoe Kraevoe Pravlenie NTO Pishchevoi Promyshlennosti; **Union of Soviet Socialist Republics**, Altaiskii Filial Vsesoyuznogo Nauchno-issledovatel'skogo Instituta Maslodel'noi i Syrodel'noi Promyshlennosti) (Editors)
433pp. (1974) [Ru] Barnaul, USSR; Altaiskii TsNTI Price 0.50r

[Continued from preceding abstr.] Possibility of using casein peptones for microbiological control of milk and milk products, by E. N. Kuchinskaya & Z. A. Ertuganova (pp. 349-350); Effect of whey concentration by evaporation on its microflora, by T. E. Shilovskaya (pp. 355-358); Study of amino acid and lipid composition of Imeretinskii cheese, by Z. Kh. Dilanyan, D. G. Chincharauli & M. S. Umanskii (pp. 389-391); Effects of denatured whey proteins on changes in proteins during cheese ripening, by K. D. Butkus, P. F. Krasheninin & V. K. Nebert (pp. 402-404); and Intranucleic free amino acids of Lactobacillus plantarum, by R. V. Bulgadaeva (pp. 414-416). Abstracts of 87 papers from this publication will appear in FSTA and are listed in the author index under **Union of Soviet Socialist Republics**, Altaiskoe Kraevoe Pravlenie NTO Pishchevoi Promyshlennosti [Cheese Symposium]. FL

300

Dairy technology and engineering. [Book]
Harper, W. J.; Hall, C. W.
viii + 631pp. ISBN 0-87055-198-1 (1976) [many ref. En] Westport, Connecticut, USA; AVI Publishing Co. Inc. Price US $43, Foreign $44 [Dep. of Food Sci. & Nutr., Ohio State Univ., Columbus, Ohio, USA]

This book attempts to interrelate the disciplines of engineering, chemistry and microbiology with selected aspects of dairy food technology and engineering. It covers in detail those unit processes used widely in dairy product manufacture. It contains the following chapters: Historical developments, by C. W. Hall (pp. 1-17, 15 ref.); Milk components and their characteristics, by W. J. Harper (pp. 18-74, 57 ref.); Organoleptic properties of dairy products, by J. Tobias (pp. 75-140, 44 ref.); General processes for fluid milks, by V. A. Jones & W. J. Harper (pp. 141-184, 14 ref.); General processes for manufactured products, by W. J. Harper & D. A. Seiberling (pp. 185-212, 9 ref.); Technology of dairy products manufactured with selected microorganisms, by F. J. Babel (pp. 213-271, 13 ref.); Environmental sanitation, by D. R. Heldman & D. A. Seiberling (pp. 272-321, 52 ref.); Efficiency and plant mechanization, by R. A. Keppeler (pp. 322-347, 8 ref.); Continuous and automated processes, by D. A. Seiberling (pp. 348-386, 6 ref.); Fluid flow and flow processes, by W. J. Harper, D. A. Seiberling & J. L. Blaisdell (pp. 387-428, 12 ref.); Heat and heat-transfer processes, by C. W. Hall (pp. 429-503, 45 ref.); Mass-transfer processes, by J. L. Blaisdell (pp. 504-538, 34 ref.); and Processing-induced changes, by W. J. Harper (pp. 539-596, 118 ref.); The appendix (pp. 597-617, 3 ref.) contains a list of 3A sanitary standards and accepted practices, and various useful tables and graphs. JA

301

Modern dairy products. [Book]
Lampert, L. M.
Ed. 3, 437pp. ISBN 0-900379-22-7 (1975) [many ref. En] London, UK; Food Trade Press Price £13.50

This is a 3rd revised edition of the book reviewed in FSTA (1972) 4 1P23. It gives a semi-technical introduction to broad aspects of the dairy industry. The first 10 chapters are concerned with milk constituents, dairy microbiology and sanitation, milk contaminants and flavour defects. The next 10 chapters describe the manufacture of milk products (fresh, cultured and dried) and milk testing methods. The final chapter considers imitation milk products and milk substitutes. MEG

302

[Automatic machines for filling milk into paper containers.] Avtomaty dlya rozliva moloka v bumazhnye pakety. [Book]
Berezin, S. V.
167pp. (1975) [Ru] Moscow, USSR; Pishchevaya

Promyshlennost' Price 0.44r

The book is intended for technicians working with automatic machines for filling milk and milk products into paper packages. It includes the following chapters: General aspects of automatic machinery for manufacture and filling of packages (pp. 5-8); Design and operation of individual sections and whole machines (pp. 9-65); Use of automatic machines (pp. 65-98); Apparatus for control and regulation (pp. 99-112); Main defects of packages and methods for their elimination (pp. 118-127); Dispensing device (pp. 128-133); Modifications facilitating the maintenance of machines for manufacture and filling of paper containers (pp. 134-145); Composite packaging materials and crates for containers (pp. 145-151); and Safety rules (pp. 165-167). STI

303

[New technology for Rossiiskii cheese production.] Syr so znakom kachestva. [Book]
Doil'nitsyn, G. V.
85pp. (1975) [Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 0.34r

The publication deals with the new improved technology for Rossiiskii cheese production, developed in Leningrad cheese factories. It includes the following chapters: Cheese factory in Leningrad (pp. 4-17); Collection and transport of milk (pp. 18-20); Rossiiskii cheese (preparation of milk for coagulation, optimum production parameters, salting, continuous production, pressing, ripening, coating of cheese, improved economy of production by the new technology) (pp. 21-70); Production of butter (pp. 71-77); and Complete utilization of milk (pp. 79-86). STI

FISH

304

Fish and shellfish processing. [Book]
Gillies, M. T.
Food Technology Review, Noyes Data Corporation No. 22, x+388pp. ISBN 0-8155-0574-4 (1975) [En] Park Ridge, New Jersey, USA; Noyes Data Corp. Price $36

This book is based on US patents since 1960 relating to the large scale processing of fish and shellfish. It supplies detailed technical information and can be used as a guide to the US patent literature in this field. The information is arranged under the following headings: Seafood preservation and struvite prevention (including chemical methods of preservation, refrigeration, seafood coating apparatus, edible coatings, irradiation, microwave and hot gas treatment, struvite and melanosis prevention) (pp. 3-43); Tuna and tuna-like fish (including thawing, treatment before cooking, precooking, skinning, butchering and canning) (pp. 44-90); Fish other than tuna (including sardines, fish roe, fish portions, batter-coated seafoods) (pp. 91-138); Molluscs (including clams and oysters, scallops, squid) (pp. 139-191); Crustaceans (including shrimps, crabs, lobsters, and crawfish) (pp. 192-238); Animal feeds (pp. 239-261); and Fish protein concentrates (including preparation by physical, chemical and biological means and from stickwater) (pp. 262-330). Company, inventor and patent number indexes are included. VJG

305

Sea turtles and the turtle industry of the West Indies, Florida, and the Gulf of Mexico. [Book]
Rebel, T. P.
Ed. 2 250pp. ISBN 0-87024-217-2 (1974) [many ref. En] Coral Gables, Florda, USA; Univ. of Miami Press Price $10

This book on marine turtles includes information on food uses of turtle meat, fat and eggs, the yield of edible parts from green turtles (Chelonia mydas), and the composition of turtle eggs. Data are also given for the turtle catch in various countries, and for the production of canned turtle and terrapin meat and products (e.g. soups) in the USA. AJDW

306

Control of fish quality. [Book]
Connell, J. J.
xi + 179pp. (1975) [many ref. En] West Byfleet, Surrey, UK; Fishing News (Books) Ltd. [Torry Res. Sta., Aberdeen, UK] Price £6.50

This well-illustrated book intended for fishery technologists, industrial technical managers and fishery administrators, is written in non-technical language, and covers fish and products from a wide range of countries. Chapters include: What is quality? (pp. 1-2); Intrinsic quality (pp. 3-28); Quality deterioration and extrinsic quality defects in raw material (pp. 29-53); Quality deterioration and defects in products (pp. 54-97); Further aspects of quality (pp. 98-106); Methods of assessing and selecting for quality (pp. 107-132); Organisation of quality control and official inspection (pp. 133-153); Standards (pp. 154-159); and Codes of practice (pp. 160-163). A 7-page bibliography and a 7-page subject index are included. AJDW

307

[Centrifugal fish pumps.] Tsentrobezhnye rybonasosy. [Book]
Krakovskii, B. S.; Dokukin, M. M.
119pp. (1974) [50 ref. Ru] Moscow, USSR; Pishchevaya promyshlennost'. Price 0.41r

Recommendations for the construction and exploitation of centrifugal pumps in the fish processing industry, based on the latest research, are presented. The book includes the following chapters: Constructional characteristics of the through-flow cavity of centrifugal fish pumps (pp. 3-15); Conditions of operation of centrifugal fish pumps (pp. 15-41); Design calculations of the impeller (pp. 41-57); Improved centrifugal fish

pumping stations (pp. 57-86); and Use of and experience with centrifugal fish pumps (pp. 86-115). STI

308

[Mechanization of fish processing plants.] Mekhanizatsiya proizvodstva rybnoi produktsii. [Book]
Romanov, A. A.
200pp. (1974) [16 ref. Ru] Moscow, USSR; Pishchevaya promyshlennost' Price 0.70r

This book deals with modern machinery and equipment used in the fish and seafood processing industry and on fish processing boats. The following chapters are included: Fish grading, sorting, cutting and filleting machines (pp. 5-44); Fish chilling and freezing machines (pp. 44-74); Manufacture of preserved fish products (pp. 74-125); Smoked and dried products (pp. 125-144); Processing of non-fish products (pp. 144-153); Fish processing aboard boats (pp. 153-176); Production of fish meal and fish oil (pp. 176-190); and Handling and transport (pp. 190-199). STI

309

Fishery products. [Conference proceedings]
Kreuzer, R. (Food and Agriculture Organization) (Editor)
462pp. ISBN 0-85238-065-8 (1973, publ. 1975) [many ref. En, Es, Fr] West Byfleet, Surrey, UK; Fishing News (Books) Ltd. Price £19.75

The full text is given of papers presented at this symposium, including: The contribution of fish technology to the utilization of fish resources, by G. H. O. Burgess (pp. 47-53, 12 ref., En, fr, es); Some dynamics of fisheries, by R. Finch (pp. 53-60, 36 ref., En, fr, es); Traditional stuffed carp ('gefilte fish'), by A. Herzberg (pp. 99-100, En, fr, es); The role of fish meal in alleviation of protein shortage in human nutrition, by S. M. Barlow & F. W. Burton (pp. 106-109, En, fr, es); Application of fish oils in the food industry, by E. J. Gauglitz, Jr., V. F. Stout & J. C. Wekell (pp. 132-136, 17 ref., En, fr, es); Problems in the industrial utilization of hake in South Africa, by K. A. Oettle (pp. 197-199, 9 ref., En, fr, es); Alternative uses of bonito in Peru, by P. W. de Haan (pp. 227-233, En, fr, es); The abalone industry in Australia, by D. G. James & J. Olley (pp. 238-242, 18 ref., En, fr, es); Utilization of squid as food, by T. Takahashi (pp. 244-247, En, fr, es); Problems in the utilization ff freshwater fish, by D. G. Iredale (pp. 267-269, 9 ref., En, fr, es); Problems in the utilization of freshwater fish in some countries of the Asia and Far East region, by D. D. Tapiador (pp. 269-271, En, fr, es); The practice of product development, by R. Kreuzer & C. Day, (pp. 278-281, En, fr, es); Reprocessing fish into composite products, by S. Ishii & K. Amano (pp. 281-283, En, fr, es); Functional and nutritive food proteins from fish, by E. G. Bligh, W. J. Dyer, L. W. Regier, J. R. Dingle & R. Legendre (pp. 290-291, 2 ref., En, fr, es); [continued in following abstr.] AJDW

310

Fishery products. [Conference proceedings]
Kreuzer, R. (Food and Agriculture Organization)
462pp. ISBN 0-85238-065-8 (1973, publ. 1975) [many ref. En, Es, Fr] West Byfleet, Surrey, UK; Fishing News (Books) Ltd. Price £19.75

[Continued from preceding abstr.] The use of fish of lower market value for human consumption, by N. I. Rekhina (pp. 295-296, 3 ref., En, fr, es); Rapid salting of fish, by J. M. Mendelsohn (pp. 301-304, 5 ref., En, fr, es); Quality requirements for fishery products, by F. Soudan (pp. 320-325, Fr, en, es); Planning to expand markets in developed countries, by A. H. Coburn (pp. 348-352, En, fr, es); Analysis and characteristics of United States demand for fishery products, by R. Whitaker (pp. 352-358, 5 ref., En, fr, es); Development of institutional catering and other outlets for in the United Kingdom, by J. J. Soulsby, (pp. 359-363, 6 ref., En, fr, es); The manager's approach to evaluating the feasibility of food protein ventures, by J. R. Champagne (pp. 363-367, 4 ref., En, fr, es); Expansion of domestic markets in developing countries, by A. M. Anderson (pp. 367-371, En, fr, es); Export markets for fishery products from developing countries, by W. Krone & E. Ruckes (pp. 371-377, 6 ref., En, fr, es); Expansion of export markets in developed countries, by L. Birkeland (pp. 377-383, En, fr, es); The Japanese experience in developing export markets for fishery products, by M. Morisawa (pp. 383-387, En, fr, es); Developing export markets for New Zealand fishery products, by W. T. Allen (pp. 387-391, En, fr, es); [continued in following abstr.] AJDW

311

Fishery products. [Conference proceedings]
Kreuzer, R. (Food and Agriculture Organization) (Editor)
462pp. ISBN 0-85238-065-8 (1973, publ. 1975) [many ref. En, Es, Fr] West Byfleet, Surrey, UK; Fishing News (Books) Ltd. Price £19.75

[Continued from preceding abstr.] Marketing aspects of powdered products in the future, by P. Jaubert (pp. 391-394, En, fr, es); and Important aspects of marketing Peruvian merluza, by P. Andersen, W. P. Appleyard, P. W. de Haan, G. H. Hordijk, E. C. A. van Noort & J. A. R. Souness (pp. 394-396, En). A further 36 papers are abstracted separately in FSTA, and are in the author index under Food and Agriculture Organization [Fishery Products Symposium]. This book includes 3 subject indexes: a general index, an index of fish species, and an index of processed fishery products. AJDW

312

Russian-English glossary of fishing and related marine terms. [Book]
Ben-Yami, M.
viii + 182pp. ISBN 0-7065-1502-1 (1975) [28 ref. En, Ru] Jerusalem, Israel; Israel Program for Scientific Translations Price £10.50 [POB 699,

Haifa, Israel]
This detailed Russian-English glossary of fishery and related terms gives translations (often with illustrations, explanations and/or cross references) of 2113 Russian terms. An appendix gives approx. 90 Russian abbreviations commonly occurring in fisheries technical literature. A 26-page English index is included. AJDW

313

[Vibration machines in the fish processing industry. Vibratsionnye mashiny v rybnoi promyshlennosti. [Book]
Aseinov, S. A.; Dekin, K. D.; Medvedik, S. I.; Terent'ev, A. V.
116pp. (1974) [Ru] Moscow, USSR; Pishchevaya promyshlennost' Price 0.40r
The book gives general information on the design and operation of vibration machines for spacing and orientation of fish during processing, sorting, dosage of loose materials, acceleration of salting, etc. It includes the following chapters: Theoretical principles of the effects of vibration on treated product (pp. 5-27); Classification and components of vibration machines (pp. 28-53); Machines for vibration of fish in bulk (pp. 54-64); Vibration machines for sorting and washing (pp. 65-76); Vibration machines for transport and space orientation of fish (pp. 77-97); Machines for vibration cutting and disintegration (pp. 98-101); Insulation and absorption of vibrations (pp. 102-108); and Supplements (pp. 109-113). STI

314

[Technology of processing fish products.] Tekhnologiya rybnykh produktov. [Book]
Shamrai, V. L.
170pp. (1975) [Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 0.38r
This publication, intended as a textbook for students in specialized schools of the fish processing industry and for workers in the industry, includes the following chapters: Characteristics of fish as raw material for processing: physical properties (pp. 4-28); Treatment of living fish: transport and storage (pp. 29-42); Freezing of fish (pp. 42-62); Salting of fish (pp. 63-88); Preservation of roe (pp. 89-94); Drying, smoking and air drying of salted fish (pp. 95-112); Production of canned fish products (pp. 113-134); Production of feeds, industrial materials and medical preparations (pp. 136-145); and Processing of other sea products (mammals, crustaceans, molluscs, algae, etc.) (pp. 146-168). STI

315

[Utilization of meat of cartilaginous marine fish for human consumption.] Pishchevoe ispolzovanie myasa okeanicheskikh khrashchevykh ryb. [Book]
Skachkov, V. P.
55pp. (1975) [Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 0.13r
This publication summarizes available information on possibilities of processing cartilaginous marine fish, particularly sharks, for production of smoked and other products, with emphasis on the special technologies required due to the composition of the meat. It includes the following chapters: Chemical and technological properties and food value of cartilaginous marine fish (pp. 4-11); Primary processing of cartilaginous fish aboard factory ships (pp. 12-16); Methods for removal of urea from meat of cartilaginous fish during processing (pp. 17-25); Improvements of sensorial properties and increase in the food value of meat of cartilaginous fish (pp. 26-29); Technology of producing smoked products (pp. 30-38); Technology of producing culinary products (pp. 39-42); Technology of producing dried shark fins (pp. 42-43); and Organization of plants for processing sharks, and mechanization of the processes (pp. 44-49). STI

MEAT AND POULTRY

316

[Sheepbreeding.] Schafzucht. [Book]
Haring, F.
368pp. ISBN 3-8001-4323-2 (1975) [many ref. De] Stuttgart, Federal Republic of Germany; Verlag Eugen Ulmer [Inst. für Tierzucht und Haustiergenetik, Univ., Göttingen, Federal Republic of Germany]
This book includes the following chapters of interest to food scientists: Heredity and breeding, (pp. 121-161) including data on selection for carcass and meat quality; and Production and marketing of lamb and mutton (pp. 207-235) including data on carcass quality, meat quality, and the market for mutton and lamb in the Federal Republic of Germany and other European countries. An 11-page bibliography is included, together with a 5-page subject index. AJDW

317

World cattle. II. Cattle of North America. [Book]
Rouse, J. E.
xiii + 650pp. (1973) [81 ref. En] Norman, Oklahoma, USA; University of Oklahoma Press Price $20
This book on the beef and dairy cattle industry in the Caribbean, Central America, Mexico, Canada and the USA includes sections on breeds, management practices, marketing, slaughterhouse and meat processing facilities, carcass grades, etc. fryyfor each country. AJDW

318

[Location of meat plants in the USSR.] Razmeshchenie myasnoi promyshlennosti SSSR. [Book]
Borisova, V. V.
128pp. (1974) [Ru] Moscow, USSR; Pishchevaya

promyshlennost' Price 0.47r

Principles for economical siting of meat processing plants are discussed, with respect to raw material supplies and other economic factors. The following chapters are included: Factors determining the siting of meat processing plants (pp. 6-25); Raw material supplies (pp. 25-52); Detn. of production capacity for large meat processing plants (pp. 52-87); siting of meat processing plants (pp. 87-105); and Relations between individual regions (pp. 105-116). STI

319

Fresh meat technology. [Book]
Karmas, E.
Food Technology Review, Noyes Data Corporation
No. 23, xi + 283pp. ISBN 0-8155-0581-7 (1975) [En] New Jersey, USA; Noyes Data Corporation Price $36

This book, based on US patents since 1960 relating to the large scale processing of fresh meat, contains 2 sections: Palatability (pp. 4-172); and Preservation (pp. 174-277). The information is arranged under the following headings: Tenderness (including feed additives, ante-mortem treatment, pre-rigor mortis treatment, post-rigor mortis treatment, ageing, and mechanical tenderizing) (pp. 4-76); Flavour and tenderness (pp. 77-92); Flavouring (including meat hydrolysates, bone hydrolysates, and synthetic flavouring (pp. 93-126); Colour (pp. 127-150); Integral texture (pp. 151-172); Moisture retention and surface protection (pp. 174-202); Antimicrobial treatment (pp. 203-227); Ionizing radiation (pp. 228-253); Other methods of preservation (pp. 254-261); Packaging and handling for storage and transportation (pp. 262-270); and Cooking methods (pp. 271-277). Company, inventor and patent number indexes are included. VJG

320

[Reports of meeting held to celebrate the 20th anniversary of the foundation of the Bulgarian Socialist Republic, held on August 27th, 1974.]
Dokladi ot Nauchna Sesiya Provedena v Chest na Yubileinata Tridesetgodishnina ot Sotsialisticheskata Revolyutsiya v B"lgariya na 27 Avgust 1974 Godina. [Conference proceedings]
Bulgaria, Ministerstvo na Zemedelieto i Khranitelnata Promishlenost; DSO "Rodopa"; **Bulgaria**, Institut po Mesopromishlenost
225pp. (1974) [Bg] Sofia, Bulgaria; Ministerstvo na za Zemedelieta i Khranitelnata Promyshlenost

Papers given at the Meeting, held in Sofia, included "Reconstruction, modernization, concentration and specialization in the Bulgarian meat industry", by I. Butanski (pp. 22-48). A further 9 papers are abstracted individually, and indexed under **Bulgaria**, Ministerstvo na Zemedelieto i Khranitelnata Promishlenost [Symposium]. HBr

321

Meat. Proceedings of the twenty-first Easter school in agricultural science, University of Nottingham, 1974. [Conference proceedings]
Cole, D. J. A.; Lawrie, R. A. (**United Kingdom**, University of Nottingham) (Editors)
596pp. (1975) [many ref. En] London, UK; Butterworth & Co. (Publishers) Ltd. Price £14.50 [Dep. of Agric. & Hort., Univ. of Nottingham School of Agric., Sutton Bonington, Loughborough, Leics., UK]

Papers presented at the Easter school on meat cover production, preservation, composition, eating quality, human nutrition and an assessment of the future role of meat. Papers include: The meat-eating habit of man, by J. Yudkin (pp. 3-15); Nutrition of farm animals, by H. Swan & D. J. A. Cole (pp. 71-84, 12 ref.); Meat in the adaptation of the human alimentary tract, by J. L. Paterson (pp. 471-479, 14 ref.); and The potential for conventional meat animals, by C. R. W. Spedding & A. M. Hoxey (pp. 483-506, 48 ref.). A 30-pp. index is included. A further 24 papers are abstracted separately and appear in the author index under **United Kingdom**, University of Nottingham [Meat Symposium]. AL

322

The quality of poultry meat. Proceedings of the second European symposium on poultry meat quality. [Conference proceedings]
Erdtsieck, B. (World's Poultry Science Association) (Editor)
6 + 85 + 473pp. (1975) [many ref. En. De. Fr] [Spelderholt Inst. for Poultry Res., Beekbergen. Netherlands]

The full text of papers presented at this symposium is given, including the following: The total quality concept, by B. Erdtsieck (pp. 1(1-12), En, 58 ref.); Microbiological aspects of poultry meat quality, by B. Simonsen (pp. 2(1-10), En, de, fr, 33 ref.); Sensory evaluation: a link between food research and food acceptance research, by J. E. R. Frijters (pp. 3(1-7), En, 1 ref.); Genetic factors influencing the carcass quality of chickens, by F. H. Ricard (pp. 4(1-16), Fr, en, many ref.); Influence of management factors on the meat and carcass quality, by S. Scholtyssek (pp. 5(1-8), En, 16 ref.); The present situation in feeding chickens in relation to quality of meat, by J. F. Jensen (pp. 6(1-5), En, 11 ref.); Feed additives for improvement of broiler quality, by R. Quilici (pp. 7(1-8), Fr, en, 11 ref.); Results of studies on the carcass quality and nutritional value of poultry, conducted at the Ivanka pri Dunaji Poultry Research Institute, Czechoslovakia, by E. Koci & A. Grom (pp. 8(1-11), De, en, fr, 11 ref.); Developments in the poultry slaughtering process, by A. R. Gerrits (pp 9(1-4), En); The principles of poultry chilling, by M. D. Ranken (pp. 10(1-10), En, 43 ref.); Freezing of poultry, by W. Partmann (pp. 11(1-15), De, many ref.); [continued in following abstr.] AJDW

323

The quality of poultry meat. Proceedings of the second European symposium on poultry meat quality. [Conference proceedings]
Erdtsieck, B. (World's Poultry Science Association) (Editor)
6 + 85 + 473pp. (1975) [many ref. En, De, Fr] [Spelderholt Inst. for Poultry Res., Beekbergen, Netherlands]

[Continued from preceding abstr.] Yields of producing, processing and consuming broilers, by C. H. Veerkamp (pp. 20(1-5), En); Microbiological standards for poultry products, by J. T. Patterson & P. A. Gibbs (pp. 26(1-8), En, 26 ref.); Bacteriological standards and micro-organisms of public health concern in broilers, by L. Leistner (pp. 27(1-9), En, de, 28 ref.); Selective media for psychrotrophic spoilage bacteria of fresh poultry, by A. W. Brant (pp. 31(1-6), En, 28 ref.); Pesticide residues and maximum limits for these residues in poultry meat and eggs, by F. W. van der Kreek (pp. 31B(1-12), En); Human safety aspects of feed additives, by T. B. Windholz (pp. 31C(1-8), En); Hygiene aspects of the chilling process, by G. C. Mead (pp. 35(1-8), En, de, fr, es, 27 ref.); General remarks on the chilling operation during poultry processing, by B. Erdtsieck (pp. 39(1-8), En); Recent Danish considerations regarding water uptake during chilling, by M. Jul (pp. 43(1-3), En); Genetic and environmental influences on broiler fat content, by J. H. van Middelkoop, A. R. Kuit & A. Zegwaard (pp. 46(1-4), En); and Color and flavor stability of mechanically-deboned poultry meat, by G. W. Froning (pp. 51(1-8), En, 15 ref.). A further 34 papers are abstracted separately in FSTA, and are in the author index under World's Poultry Science Association [Poultry Meat Symposium]. AJDW

324

The buffaloes of China. [Book]
Cockrill, W. R.
xii + 96pp. (1976) [32 ref. En] Rome, Italy; Food & Agriculture Organization Price $8

This book includes brief sections on the use of buffaloes for milk production and meat production in China, with data for milk yield, milk composition, carcass wt., dressing %, etc. Husbandry, breeding, diseases, etc. are also considered. AJDW

325

Meat hygiene. [Book]
Libby, J. A.
Ed. 4, xii + 658pp. ISBN 0-8121-0466-8 (1975) [many ref. En] Philadelphia, USA; Lea & Febiger Price £15.30 [Coll. of Vet. Med., Univ. of Minnesota, St Paul, Minnesota, USA]

This revised and expanded edition of this comprehensive textbook on meat hygiene includes the following chapters: History, by J. A. Libby (pp. 1-15, 2 ref.); Elements and controls of meat hygiene, by J. L. Blair (pp. 16-32, 10 ref.); Humane slaughter, by J. A. Libby (pp. 33-39, 4 ref.); Ante-mortem inspection, by J. A. Libby & M. R. Humphreys (pp. 40-66, 6 ref.); Carcass dressing and post-mortem inspection procedures, by J. A. Libby (pp. 67-84); Post-mortem dispositions, by J. A. Libby & M. R. Humphreys (pp. 85-186, many ref.); Trichinosis, by W. F. Zimmerman (pp. 187-204, 30 ref.); Comparative anatomy of food animals, by H. W. Ockerman (pp. 205-231, 18 ref.); Chemistry of muscle and major organs, by H. W. Ockerman (pp. 232-243, 9 ref.); Deteriorative changes in meat, by W. E. Jennings (pp. 244-260, 33 ref.); Food-borne illness, by W. E. Jennings (pp. 261-295, many ref.); Wholesomeness, adulteration and misrepresentation, by J. D. Willis (pp. 296-311, 6 ref.); Sanitation facilities and procedures in plant operation, by J. L. Blair (pp. 312-392, 23 ref.); [continued in following abstr.] AJDW

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Meat hygiene. [Book]
Libby, J. A.
Ed. 4, xii + 658pp. ISBN 0-8121-0466-8 (1975) [many ref. En] Philadelphia, USA; Lea & Febiger Price £15.30 [Coll. of Vet. Med., Univ. of Minnesota, St Paul, Minnesota, USA]

[Continued from preceding abstr.] Preparation of meats and meat food products, by J. D. Willis (pp. 393-450, 24 ref.); Meat additives, by J. Spaulding (pp. 450-469, 16 ref.); Toxic residues, by J. Spaulding (pp. 410-419, 25 ref.); Exposure to ionizing radiation, by J. D. Lane (pp. 480-495, 5 ref.); Organized meat hygiene control, by L. E. Hinson (pp. 496-512); and Meat grading, by R. F. Epley & M. L. Hamre (pp. 513-545). Appendices give: data for meat production and consumption in the USA; the composition of various meat cuts; various US laws for meat hygiene and inspection; and a pooled sample technique for detection of trichinae. A 6-page glossary and a 34-page subject index are included. AJDW

327

[Industrial control and methods for examination of quality of meat and meat and poultry products.]
Proizvodstvenno-tekhnicheskii kontrol' i metody orsenki kachestva myasa, myaso- i ptitseproduktov. [Book]
Volkova, A. G.; Podlegaev, M. A.; Rusakov, V. N.; Solntseva, G. L.; Teternik, D. M.; Freidlin, E. M.; Tsyss, E. F.
575pp. (1974) [Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 2.19r

The book is intended for those working in veterinary and sanitary control of the meat industry. It includes the following chapter concerning visual, physico-chemical and microbiological method for veterinary and sanitary examinations of products, rooms, and equipment: Veterinary-sanitary control (pp. 3-52); Sanitation in production of meat and meat products (pp. 53-63); Technological control (pp. 64-86); Physico-chemical control (pp. 87-185); and Bacteriological control (pp. 186-239). STI

328

The meat we eat. [Book]
Romans, J. R.; Ziegler, P. T.
Ed. 10, xix + 776pp. (1974) [En] Danville, Illinois, USA; Interstate Printers & Publishers, Inc. Price $15.35 [Dep. of Anim. Sci., Univ. of Illinois, Urbana, Illinois, USA]

This 10th edition of this comprehensive text book of meat and meat processing includes the following chapters: Introduction (pp. 3-14); Preparations for slaughter - safety and sanitation (pp. 15-23); Federal and State meat inspection (pp. 25-76); Hog slaughter (pp. 77-109); Cattle slaughter (pp. 111-145); Lamb slaughter (pp. 147-171); Veal and calf slaughter (pp. 173-182); Dressing poultry and game (pp. 183-226); Packing house by-products (pp. 241-261); Federal meat grading and its interpretations (pp. 263-379); Pork identification and fabrication and rendering lard (pp. 383-438); Beef identification and fabrication (pp. 439-487); Lamb identification and fabrication (pp. 489-526); The veal carcass and its cuts (pp. 527-530); Sausages (pp. 531-557); The preservation and storage of meat (pp. 559-611); Meat merchandising (pp. 613-624); Meat as a food (pp. 625-653); Preparing and serving meats (pp. 655-706); and Meat judging and evaluation (pp. 707-745). A detailed 20 page subject index is included. AJDW

329

Commercial processing of poultry. [Book]
Weiss, G. H.
Food Technology Review, Noyes Data Corporation No. 31, ix + 254pp. ISBN 0-8155-0612-0 (1976) [En] Park Ridge, New Jersey, USA; Noyes Data Corp. Price $32

This book is based on US patents relating to the processing of poultry. The information is arranged under the following headings: Preservation (including treatment with antibiotics, sorbic acid, lactic acid and inorganic salts) (pp. 2-30); Chilling and freezing (including minimizing dehydration, chilling techniques and freezing techniques) (pp. 31-63); Enhancing palatability (including antemortem injection, postmortem injection, and addition of flavouring agent) (pp. 64-103); Stuffed products (whole poultry, poultry legs and poultry breasts) (pp. 104-135); Moulded and compressed rolls and loaves (including moulding without added binder, gelatin binder, gluten binder, poultry trimmings and by products, soluble protein exudate as binder, special products, and apparatus) (pp. 136-205); Batter-coated products (pp. 206-217); Special cooking procedures and products (pp. 218-230); and Poultry concentrates and flavours (pp. 231-249). Company, inventor and US patent number indexes are included. VJG

330

[Hygiene of meat.] Hygiena miesa. [Book]
Prost, E.
429pp. (1975) [Pl] Warsaw, Poland; Panstwowe Wydawnictwo Rolnicze i Lesne Price 67zl

The book gives information on veterinary and sanitary aspects relevant to meat processing, and is intended for those studying or working in the field of veterinary inspection. It includes the following chapters: History of slaughter animals and meat research (pp. 13-17); Slaughter animals (pp. 18-54); Detn. of age and sex of slaughter animals (pp. 55-71); Slaughter (pp. 72-125); Quality evaluation of slaughtered animals (pp. 126-153); Meat (pp. 154-207); Endogenous postmortem changes in meat (pp. 208-222); Changes in meat caused by microorganisms (pp. 223-246); Animal fats (pp. 247-270); Principles of veterinary inspection of slaughter animals and meat (pp. 271-303); Sanitation and veterinary treatment in case of infections diseases of slaughter animals (pp. 304-369); Sanitation and veterinary treatment in case of parasitic diseases of slaughter animals (pp. 370-395); Sanitation and veterinary treatment in case of certain internal diseases (pp. 396-398); and Anomalies in meat quality (pp. 399-421). STI

331

[Technology of poultry and poultry products processing.] Tekhnologiya pererabotki produktov ptitsevodstva. [Book]
Tret'yakov, N. P.
238pp. (1974) [Ru] Moscow, USSR; Kolos Price 0.83r

This book, giving information on the present state of processing poultry meat, eggs and feathers, is intended for zootechnical and agricultural schools. It includes the following chapters: Organization of poultry products processing in the USSR (pp. 5-14); Chemical composition and nutritive value of poultry meat (pp. 15-28); Keeping and preparation of poultry before slaughter (pp. 29-40); Technological process of poultry processing (pp. 41-98); Processing of poultry on continuous mechanical lines (pp. 99-119); Production of packaged meat, sausages and canned products (pp. 119-133); Technology of production and processing of eggs (pp. 134-167); Technological process for production frozen egg products (168-184); Technological process for production dried egg products (pp. 185-196); Processing of feathers (pp. 197-210); Production of animal feeds from poultry industry wastes (pp. 211-227); and Quality control of egg products (pp. 228-237). STI

332

Handbook on meat inspection. [Book]
United Kingdom, British Veterinary Association
Ed. 4, 98pp. (1973) [En] London, UK Price £2.50

This practical handbook on meat inspection (intended for veterinary surgeons and students) includes the following sections: Ante-mortem inspection (pp. 7-16); Post-mortem inspection of meat (pp. 16-27); The carcass (pp. 27-44); Model detention, rejection and condemnation certificates (pp. 45-47); Laboratory aids to meat inspection (pp. 48-58); and Meat inspection legislation (covering regulations in England and Wales,

Scotland, Eire and Northern Ireland, certificates for export of meat, and EEC legislation for intra-community trade in fresh meat and import of fresh meat from third countries). AJDW

333

Principles of meat science. [Book]
Forrest, J. C.; Aberle, E. D.; Hedrick, H. B.; Judge, M. D.; Merkel, R. A.
417pp. (1975) [many ref. En] San Francisco, USA; W. H. Freeman & Co. [Purdue Univ., Lafayette, Indiana, USA]

This introductory textbook of meat science, intended for university students, includes the following chapters: Meat as a food (pp. 3-10, 4 ref.); Animal production goals (pp. 11-21, 5 ref.); Structure and composition of muscle and associated tissues (pp. 23-81, 13 ref.); Growth and development (pp. 82-126, 11 ref.); The mechanism of muscle contraction (pp. 127-142, 5 ref.); Conversion of muscle to meat (pp. 145-156, 6 ref.) Factors affecting postmortem changes and the ultimate properties of meat (pp. 157-173, 6 ref.); Properties of fresh meat (pp. 174-189, 6 ref.); Principles of meat processing (pp. 190-226, 6 ref.); Microbiology, deterioration and contamination of meat (pp. 227-256, 6 ref.); Methods of storing and preserving meat (pp. 257-287, 11 ref.); Palatability and cookery of meat (pp. 288-305, 11 ref.); Nutritive value (pp. 306-315, 7 ref.); Meat inspection (pp. 316-330, 6 ref.); Meat grading and standardization (pp. 331-354, 8 ref.); By-products of the meat industry (pp. 355-368, 6 ref.); and Meat identification (pp. 367-402, 5 ref.). A 15pp. subject index is included. AJDW

334

Animal science. [Book]
Yeates, N. T. M.; Edey, T. N.; Hill, M. K.
vii + 389pp. ISBN 0-08-018209-7 (1975) [many ref. En] Potts Point, NSW, Australia; Pergamon Press (Australia) Pty. Ltd. Price £10 [Dep. of Livestock Production, Univ. of New England, Armidale]

This textbook of animal science includes a detailed section on meat. Chapters in this section are: The beef carcase and its tissues (pp. 169-185); The definition and measurement of meat quality - tenderness (pp. 186-202); Other quality considerations (pp. 203-218); Beef carcase appraisal and grading (pp. 219-239); and Mutton and lamb (pp. 240-252). A 19-page bibliography and an 18-page subject index are included. AJDW

335

Vegetable protein meat extenders and analogues. [Book]
Duda, Z.
vii + 89pp. AGA/MISC/74/7 (1974) [214 ref. En] Rome, Italy; Food & Agriculture Organization

The information in this publication is arranged under the following headings: Introduction (pp. 1-3); Raw materials (pp. 3-6); Definitions of meat extenders and analogues (p. 6); Protein rich products originating from soybeans (soy flour and grits, soy protein concentrates, soy protein isolates, texturized soy protein) (pp. 6-26); Technological and functional properties of vegetable protein (pp. 27-28); Market considerations (p. 29); A random selection of TVP extenders and analogues with their characteristics and uses (produced by the following: Miles Laboratories, Inc., Swift, General Mills, Inc., Worthington Foods, Inc., Archer Daniels Midland Co., Purdy Steak Corp., A. E. Staley Manufacturing Co., Ralston Purina Company, Central Soya International Inc., Nabisco, Inc. and Lucas Meyer) (pp. 29-43); Possible sources of meat substitutes other than soybeans (including beans, rapeseed, sunflower seed, cottonseed and peanuts) (pp. 43-46); General technological considerations (pp. 46-47); Projected consumption and market penetration (pp. 47-63); Cost considerations (pp. 63-66). 4 appendices are included: USA soybean processors and products manufactured (pp. 79-82); Selected recipes using TVP for Type A school lunches (pp. 83-86); Addresses of some companies making soy protein products (pp. 87-89); and Soybean utilization chart. VJG

336

Processed meat technology. [Book]
Karmas, E.
Food Technology Review, Noyes Data Corporation No. 33, xii + 368pp. ISBN 0-8155-0627-9 (1976) [En] Park Ridge, New Jersey, USA; Noyes Data Corporation Price $39

This book is based on US patents issued since 1960 that deal with processed meat technology. It is divided into 2 parts: Processing ingredients and methods (pp. 3-216); and Processed meat products (pp. 217-360). The information is arranged under the following headings: Curing methods and ingredients (including dietetic curing compositions) (pp. 4-39); Increased water binding and yield (pp. 40-61); Improved curing formulations (pp. 62-86); Integral meats (including mechanical methods and apparatus, restructured meats and binding agents) (pp. 87-118); Smoking (pp. 119-148); Thermal processing and methods (pp. 149-182); Miscellaneous processing methods (including fluid injection, moisture related processing, composition control, tenderization and packaging methods) (pp. 183-216); Bacon production (pp. 218-249); Ham products (pp. 250-267); Beef products (pp. 268-278); Patty-type products (pp. 279-307); Dehydrated snack and convenience products (pp. 308-324); and Various novel products (pp. 325-360). Company, inventor and patent number indexes are included. VJG

337

Practical meat inspection. [Book]
Wilson, A.
Ed. 2, viii + 236pp. ISBN 0-632-00271-9 (1975) [En] Oxford, UK; Blackwell Scientific Publications

Price £4.75 [City of Birmingham Environmental Dep., UK]

This concise practical textbook of meat inspection (intended for veterinary students, trainee meat inspectors and trainee public health inspectors) includes the following chapters: Slaughter of animals (pp. 1-7); Physiology (pp. 8-20); Anatomy (pp. 21-75); Sex characteristics and estimation of age (pp. 76-83); Abnormal and general pathological conditions (pp. 84-99); Judgement and specific diseases (pp. 100-115; Parasites and parasitic diseases (pp. 116-144); Affections of specific parts and tumours (pp. 145-168); Poultry (pp. 169-183); Rabbits (pp. 184-187); Notifiable diseases (p. 188); Food poisoning from meat (pp. 189-191); and Meat preservation and meat products (pp. 192-220). An appendix gives current meat inspection and associated legislation in England and Wales, Scotland, and Northern Ireland. A glossary of colloquial terms is included. An 11 page subject index is given. AJDW

338

[Meat processing.] Przetworstwo miesne. [Book]
Gorska, D.; Jemielity, M.; Krajewska, D.; Polakowski, Z.; Tarczynski, M.
112pp. (1975) [Pl] Warsaw, Poland; Zaklad Wydawnictw CRS Price 22zl

The book is intended as a practical manual for technicians in the meat processing industry. It includes the following chapters: Raw meat reception in the light of existing regulations and economical use of meat in processing plants (pp. 7-22); Slaughter-house production (pp. 23-42); Technology of meat processing (pp. 43-73); Quality of final products (pp. 75-81); Storage and handling of the final products (pp. 82-99); Standards of acceptable losses in the meat processing industry (pp. 100-103); and List of Polish standards for meat processing (pp. 104-112). STI

339

[Equipment and apparatus for processing cattle slaughterhouse products.] Oborudovanie i apparaty dlya pererabotki produktov uboya skota. [Book]
Gorbatov, V. M. (Editor)
485pp. (1975) [Ru] Moscow, USSR; Pishchevaya Promyshlennost' Price 1.80r

The book, intended for technicians working in the meat industry, includes the following chapters: Transportation methods (pp. 3-35); Equipment for cold treatment of meat and meat products (pp. 36-112); Pressing equipment (pp. 113-131); Apparatus and continuous operating equipment for processing fatty materials of animal origin (pp. 132-225); Equipment for distillation of liquids (pp. 225-241); Drying units (pp. 242-287); Use of electrophoretic methods for treatment of meat products (pp. 288-366); Equipment for production of gelatin and glue (pp. 367-398); Means for sanitary treatment of raw materials and equipment (pp. 399-438); and Compressors (pp. 438-472). STI

ADDITIVES

340

[Seasonings. Botanical and chemical investigation.] Gewürze. Botanische und Chemische Untersuchung. [Book]
Melchior, H.; Kastner, H.
290pp. ISBN 3-489-68914-3 (1974) [many ref. De] Berlin: Verlag Paul Parey

This book gives an illustrated account of the structure, composition, uses, analysis etc. of numerous herbs, spices, etc., together with sections on analytical and test methods, packaging and storage, and legal aspects. A 15-page bibliography and a 12-page subject index are included. AJDW

341

[Emulsifiers. I. Action of emulsifiers in foods.] Emulgatoren. I. Wirkung von Emulgatoren in Lebensmitteln. [Booklet]
Germany, Federal Republic of, Gesellschaft Deutscher Chemiker, Fachgruppe Lebensmittelchemie und Gerichtliche Chemie
47pp. (1974) [45 ref. De] Frankfurt am Main, Federal Republic of Germany Price DM2.50

This publication (one of the series 'Monographs on the Technology of Additives') includes a section (pp. 5-11) on the general characteristics of emulsifiers and emulsions, and sections on the applications and effects of emulsifiers in various classes of foods: spreadable fats, mayonnaises and emulsified sauces (pp. 12-14); bakery products (pp. 14-22, 16 ref.); starch-containing foods (pp. 23-24); instant powdered products (pp. 24-28, 2 ref.); chocolate (pp. 28-36, 23 ref.); sausages (pp. 37-40, 2 ref.); soft drinks and soft drink bases (p. 41); spices and spice extracts (pp. 42-44); and ice cream (pp. 44-46, 2 ref.). AJDW

342

[Emulsifiers. II. Lecithin, and mono- and diglyceride citric acid esters.] Emulgatoren. II. Einzeldarstellungen: Lecithin, mono- und Diglycerid-Citronensäureester. [Book]
Germany, Federal Republic of, Gesellschaft Deutscher Chemiker, Fachgruppe Lebensmittelchemie und Gerichtliche Chemie
16pp. (1974) [many ref. De] Frankfurt am Main, Federal Republic of Germany Price DM2.50

This publication (one of the series Monographs on the Technology of Additives) consists of 2 independently-paginated sections, one dealing with lecithin, the other dealing with mono- and diglyceride citric acid esters. Aspects considered include specifications, definitions, composition, physico-chemical properties, stability, analytical methods, toxicology, applications in foods, and legal aspects. AJDW

343

[Seasonings. Characteristics, contamination and quality changes.] Gewürze. Eigenschaften, Verunreinigungen und Qualitätsveränderungen. [Book]
Askar, A.; Bielig, H. J.; Treptow, H.
Fortschritte in der Lebensmittelwissenschaft No. 3, vii + 87pp. ISBN 3-7983-0203-0 (1975) [150 ref. De] Berlin; Universitätsbibliothek der Tech. Univ. Price DM7 [Inst. für Lebensmitteltech., Tech. Univ., Berlin (West)]

Sections in this book on herbs and spices, the third in the series 'Fortschritte in der Lebensmittelwissenschaft' are: Characteristics (pp. 1-31, 55 ref.); Contamination (pp. 32-47, 42 ref.); Quality changes (pp. 48-73, 29 ref.); and Seasoning compounds and flavour intensifiers (pp. 74-86, 24 ref.). Chapters within these sections are: Nutritional-physiological characteristics (pp. 1-3); Organoleptic characteristics (pp. 4-20); Antioxidative characteristics (pp. 21-22); Antimicrobial characteristics (p. 23); Other characteristics (pp. 24-25), i.e. water absorption capacity, and lipase and saccharase activities; Microbial content (pp. 32-35); Contamination with light filth (pp. 36-38); Adulteration (pp. 38-41); Residues of pesticides and fumigants (p. 42); Quality changes during storage (pp. 48-57); Quality changes during grinding (pp. 58-59); Quality changes during manufacture and storage of dishes (pp. 59-69); Single seasonings (p. 74); Seasoning mixtures (pp. 74-75); Seasoning preparations (pp. 75-76); Seasoning extracts (essences) (pp. 76-78); Flavour intensifiers (pp. 78-81), i.e. sodium glutamate, nucleotides, protein hydrolysates, maltol; and Use of seasonings in dietetics (pp. 82-83). JA

344

Acidulants for food and beverages. [Book]
Arnold, M. H. M.
vi + 137pp. ISBN 0-900379-19-7 (1975) [Ru] London, UK; Food Trade Press Ltd. Price £7.50

This tectbook on acidulants is written from the point of view of the British market and British tastes, but differences in Continental and US taste have been highlighted where significant. Chapters included are: Generalities (pp. 1-6); The acids of fruit (pp. 7-21); The secondary acidulants (pp. 22-31); Minor and marginal acidulants (pp. 32-38); Lactones and salts (pp. 39-44); Metabolism and toxicity (pp. 45-52); The nature of sourness (pp. 53-59); Ancillary effects: preservation; sequestration; plasticization (pp. 60-71); Minor considerations (pp. 72-79); Storage and handling; hazards; analysis and assay (pp. 80-84); Legal aspects (pp. 85-90); Sugar confectionery (pp. 91-96); Preserves (pp. 97-101); Canned, dried and frozen fruit and vegetables (pp. 102-103); Miscellaneous desserts; powder mixes (pp. 104-108); Soft drinks (pp. 109-111); Fermented beverages (pp. 112-117); Pickles and sauces (pp. 118-121); Animal protein products (pp. 122-128); and Cereal products and chemical leavening (pp. 126-130). VJG

345

Feranoli's handbook of flavor ingredients. Vol. I. [Book]
Furia, T. E.; Bellanca, N. (Editors)
Ed. 2, 551pp. ISBN 0-87819-534-3 (1975) [many ref. En] Cleveland, Ohio, USA; CRC Press, Inc. Price $34.95 [Dynapol, Palo Alto, California, USA]

This revised, expanded 2nd edition has been necessitated by the number of new flavour ingredients developed to meet new and increasingly difficult problems presented to flavour manufacturers by the food industry. As with the 1st edition [FSTA (1972) 4 4T204] the same 4 part format has been retained. Vol. 1 of the revised edition contains the first 2 parts: General considerations (pp. 3-264); and Natural flavours (pp. 271-525). Chapters included are: Definitions (pp. 3-4, 11 ref.); History and evolution (pp. 5-7, 2 ref.); Sensory mechanisms and chemical structure, by T. E. Furia (pp. 8-11, 35 ref.); Human taste perception, by H. L. Meiselman (pp. 12-43, 130 ref.); Biogenesis (p. 44, 3 ref.); Identification and evaluation of flavours (pp. 45-46); Pyrazines in food, by J. A. Maga & C. E. Sizer (pp. 47-131, many ref.); Precursors of sulphur containing compounds in food flavours, by L. Schutte (pp. 132-183, 173 ref.); Volatile sulphur compounds in food flavours, by M. L. Shankaranarayana, B. Rahavan, K. O. Abraham & C. P. Natarajan (pp. 184-227, 337 ref.); Thiazoles in food, by J. A. Maga (pp. 228-238, 39 ref.); Flavour potentiation (p. 239); Relationship of taste to flavour: the effect of sweetener on flavour (pp. 240-242); Nomenclature and classification of flavour ingredients, by S. R. Schay (pp. 243-249, 10 ref.); and General methods of preparation, by S. R. Schay (pp. 250-264, 13 ref.). A 30 pp. bibliography is included. VJG

346

Fenaroli's handbook of flavor ingredients. Vol. 2. [Book]
Furia, T. E.; Bellanca, N. (Editors)
Ed. 2, 928pp. ISBN 0-87819-532-7 (1975) [many ref. En] Cleveland, Ohio, USA; CRC Press, Inc. Price $45.95 [Dynapol, Palo Alto, California, USA]

The third and fourth parts of this second edition [See preceding abstr. for volume 1] are: Synthetic flavours (pp. 3-564); and The use of flavour ingredients in food (pp. 567-871). Chapters included are: Alphabetical listing of approximately 1000 synthetic flavour ingredients (pp. 3-564, many ref.); Relationship of certain flavour ingredients to taste and flavour (pp. 567-572); Floral and citrus flavours (pp. 573-577); Fruital flavours (pp. 578-599); Bitter flavours (pp. 600-603); Alcoholic beverages (pp. 604-635); Non-alcoholic beverages (pp. 636-664); Baked goods (pp. 665-668); Bread flavours, by J. A. Maga (pp. 669-759, many ref.); Confections (pp. 760-763); Dairy products (pp. 764-773); The role of enzymes in food flavour, by B. K. Dwivedi (pp. 774-796, 114 ref.); Sauces, dressings, condiments, and powdered flavours (pp. 797-804);

Soups and broths (pp. 805-806); Desserts (pp. 807-808); Meats (pp. 809-811); Meat flavours, by B. K. Dwivedi (pp. 812-860, 140 ref.); Fish (p. 861); Vegetables (pp. 862-864); and Miscellaneous products (pp. 865-869). An 8pp. bibliography is included. VJG

347

Encyclopedia of food chemicals.
Anon.
Food in Canada **36** (4) 27-54 (1976) [En]
An alphabetical list is provided or all additives listed in Section B.16.100 of the Food and Drug Regulations as given in Schedule 42 of the Canada Gazette Part II, Volume 98 and subsequent amendments. JRR

348

Specifications for identity and purity of some food additives including food colours, flavour enhancers, thickening agents and others.
Food & Agriculture Organization; World Health Organization
FAO Nutrition Meetings Report Series No. 54B, v + 216pp. (1975) [En] Rome, Italy
Specifications and identity tests given in this publication were prepared at the 18th session of the Joint FAO/WHO Expert Committee on Food Additives and should be considered in conjunction with the report of that meeting [see FSTA (1975) **7** 11T558]. Specifications are given for (i) food colours: annatto extracts, azorubine, beet red, β-apo-8'-carotenal, β-apo-8'-carotenoic acid methyl or ethyl ester, β-carotene (synthetic), Brilliant Black PN, canthaxanthin, caramel colour (NH_3 process), chlorophyll copper complex, chlorophyllin copper complex (Na or K salt), erythrosine, Food Green S, indigotine, iron oxides (and hydrated iron oxides), Patent Blue V, Ponceau 4R, Quinoline yellow, and turmetic; (ii) flavour enhancers: calcium d-L-glutamate, calcium 5'-guanylate calcium 5'-inosinate, calcium 5'-ribonucleotides, disodium 5'-guanylate, disodium 5'-inosinate, disodium 5'-ribonucleotides, L-(+)-glutamic acid, monoammonium L-glutamate, and monopotassium L-glutamate; (iii) thickening agents: enzyme-treated starches, carrageenan, pectin, tara gum and xanthan gum; and (iv) miscellaneous food additives: including aluminium potassium sulphate, aluminium sulphate, butyl p-hydroxybenazoate, calcium aluminium silicate, calcium gluconate, calcium lactate, calcium saccharin, dioctyl sodium sulphosuccinate, potassium chloride, potassium lactate, saccharin, sodium acetate, sodium lactate, and sodium saccharin. This document is also published as World Health Organization Food Additive Series No. 7. AL

349

Food flavoring processes. [Book]
Pintauro, N. D.
Food Technology Review, Noyes Data Corporation No. 32, xii + 209pp. ISBN 0-8155-0618-X (1976) [En] Park Ridge, New Jersey, USA; Noyes Data Corp. Price $39.00
This book is based on US patents issued since 1961 that deal with food flavouring processes. The information is arranged under the following section headings: Fruit and vegetable flavours (including strawberry, raspberry, citrus and potato flavours) (pp. 2-25); Dairy flavours (including cheese flavour additives, cheese flavours by fermentation, and butter flavours) (pp. 26-41); Bread flavours (including proline reaction products, whey fermentation methods, and sourdough flavours) (pp. 42-53); Meat flavours (pp. 54-96); Seasonings and flavour enhancing formulations (including garlic, mustard, onion and vinegar flavours, and soy sauce processes) (pp. 97-134); Nutty, fried and roasted flavours (pp. 135-147); Coffee, chocolate and tea flavours (pp. 148-165); Sweetness, freshness and masking (pp. 166-180); and Flavour emulsions and fixation (pp. 181-200). Company, inventor and US patent number indexes are included. VJG

350

[Sterilization and additives in food preservation.] La sterilizzazione e gli additivi nella conservazione degli alimenti. [Book]
Tateo, F.
165pp. (1974) [many ref. It] Pinerolo, Italy; Chiriotti Editori Price £5.50 [London, UK; Food Trade Press]
The role of sterilization and the additives as means for increasing the storage life of foods is discussed in detail in this book, which consists of the following chapters: Changing the composition of foods (pp. 5-7, Introduction); Heat sterilization of foods (pp. 9-23); Additives (definition, classification, regulation, toxicological tests) (pp. 25-37, 22 ref.); Regulations on chemical additives permitted in the preparation and for the preservation of foods (including a list of permitted additives, their application and max. doses, as well as a list of their characteristics and purity requirements) (pp. 39-84); Methods for the control of the purity requirements of preservatives (pp. 85-125); and Official methods for determination of some preservatives in vegetables and non-alcoholic beverages, and of pimaricin in cheese (pp. 127-149). A list of common foods and additives permitted for them is appended (pp. 151-156). HBr

LEGISLATION

351

[Food legislation. Collected texts. Supplement, July, 1975.] Lebensmittelrecht. Textsammlung. Ergänzungslieferung Stand Juli 1975. [Book]
Zipfel, W. (Editor)
450pp. (1975) [De] Munich, Federal Republic of Germany; Verlag C. H. Beck Price DM 22.50
This booklet (the 10th supplement to the 6th edition or the 3rd supplement to the 8th edition)

contains supplements and amendments to food legislation in the Federal Republic of Germany, which are hereby updated to July 1975. [See also FSTA (1975) **7** 9U280.] AJDW

352

[Technical rules on sales of food products. Technical equipment for stores, workshops and means of transport.]
Rochefrette, M.
Alimentaria No. 66, 17, 19, 21, 23, 24, 27, 29, 31, 33-34, 37 (1975) [Es]
See FSTA (1975) **7** 7U195.

353

Plastics for food contact applications. A code of practice for safety in use. Amendments and additions. [Booklet]
United Kingdom, British Plastics Federation
9pp. (1976) [En] London, UK
This list of additions and amendments brings the publication up to date as of Jan. 1976. [See FSTA (1975) **7** 9U275 for details of the book.] HBr

354

Office consolidation of the Food and Drugs Act and of the Food and Drug Regulations with amendments to June 24, 1975. [Book]
Canada, Department of National Health & Welfare
146pp. (1975) [En] Ottawa, Canada; Information Canada
This loose-leaf publication gives the text of the Canadian Food and Drugs Act and Food and Drug Regulations, including recent amendments and additions up to 24 June 1975. [See FSTA (1976) **8** 2U45 for the preceding issue.] AJDW

355

Office Consolidation of the Food and Drugs Act and of the Food and Drug Regulations with amendments to Sept. 25, 1975. [Booklet]
Canada, Department of National Health & Welfare
36pp. (1975) [En] Ottawa, Canada; Information Canada
This publication gives the text of amendments to the Canadian Food and Drugs Act and Food and Drug Regulations, as of Sept. 25, 1975. An index of permitted food additives (with reference to the appropriate section of legislation) is included. [see FSTA (1976) **8** 2U45 for preceding issue.] AJDW

356

[Food legislation. Collected texts. Supplement, October 1975.] Lebensmittelrecht. Textsammlung. Ergänzungslieferung Stand Oktober 1975. [Booklet]
Zipfel, W. (Editor)
250pp. ISBN 3-406-06141-9 (Undated) [De]
Munich, Federal Republic of Germany; Verlag C. H. Beck Price DM13.50
This publication (the 11th supplement to the 6th edition, or the 4th supplement to the 8th edition) contains supplements and amendments to food legislation in the Federal Republic of Germany, which is thus updated to October 1975. [See FSTA (1976) **8** 3U101 for the preceding supplement.] AJDW

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